Rutgers

A Foundation for Excellence - The 2003 Physical Master Plan

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Richard L. McCormick, President

November 17, 2003

To the Rutgers University Community:

In 2001, Rutgers University initiated an unprecedented system-wide master planning process that comprehensively assessed the University's facilities needs and physical growth in support of its academic mission. A daunting task by any measure, the document before you is the product of nearly three years of institutional analysis drawn from the input of countless members, organizations and constituencies from every aspect of the University community.

In these most difficult of economic environments, Rutgers faces significant challenges to keep pace with enrollment growth, advancing technologies, and regional development. The University is equally cognizant of its role as steward of its cultural heritage, campus environs and ecological resources. The Master Plan is intended to provide a conceptual outline of controlled University development that will create for us a coherent array of facilities that can support learning across all dimensions of life within the University community.

As such, it is a pleasure to introduce to you the 2003 Rutgers University Master Plan for Camden, Newark and New Brunswick/Piscataway campuses. This comprehensive document provides a springboard for Rutgers to deploy its limited resources as effectively as possible to maintain, enhance and provide even greater teaching, research and service to the people of New Jersey.

Sincerely,

Richard L. Mccomich

Richard L. McCormick

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Executive Summary

For over 200 years, Rutgers, the State University of New Jersey has served the state of New Jersey and its residents. With extension services in all twenty-one counties and academic campuses in Camden, Newark, and New Brunswick/ Piscataway, the University is organized to provide a wide range of educational and outreach programs. Over 17 schools and colleges offer more than 100 majors and 4,000 courses in engineering, life science, social science and the arts. The University's long and storied history has created a place of varied communities and landscapes, academic and research opportunities. It is this unique and diverse background, reflective of the state it serves, that allows Rutgers University to meet and exceed new levels of excellence in academics, research, and service.

In 2001, Rutgers embarked on its fourth century by initiating the University's first-ever comprehensive master plan. The process began with the hiring of the firm Paulien Associates to provide a detailed analysis of the University's current and future space needs. Using the data and growth models developed during the study, Rutgers, with the assistance of Ayers/Saint/Gross Architects + Planners commenced with the creation of a physical master plan. Beyond the accommodation of needed educational and research facilities, the University effort aimed to honor its great heritage and enhance its prospects for the near and distant future.

The master plan process was divided into two phases (Observations and Conceptualization/Synthesis) and applied to all three Rutgers University campuses. As part of the Observation phase the planning team mapped and documented each campus, reviewed previous planning studies and strategic documents, and conducted comparative analysis with other peer institutions.

Most importantly, the team met on numerous occasions with students, administrators, faculty, staff, and its host communities. Their knowledge and insight have proved invaluable to the understanding of the existing University and the planning of its future.

Conceptualization and Synthesis involved the testing of development options and policy strategies that would enhance the most successful campus attributes and improve those that were deemed lacking or inadequate. These proposals were presented regularly to top administrators and at several intervals to the University community. The feedback from these forums and further analysis by the team itself, led to the recommendations laid out in this document. We believe that though this is just one step in a continual planning process, the result is a clear vision of how the University may grow in size and stature, laying the foundation of excellence for the century to come.



Camden Campus







Introduction



Prior to the creation of the physical master plan, Paulien Associates developed a comprehensive study of the university's facility needs via peer comparison and nationally accepted benchmarks. The study found a general deficiency of approximately 200,000 gross square feet (gsf). Market growth scenarios for 2011 predicted space needs to over 100,000 gsf. The law school accounted for the majority of the space needs with additional deficits noted in laboratory, faculty office and recreation space. The study found that Rutgers-Camden's ability to create a strong student life program is hindered by the lack of a significant residential population.

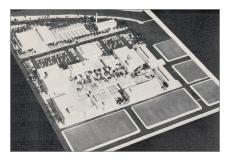
The physical master plan analyzes the existing character of the campus buildings and grounds, distribution of programs, and efficiency of movement systems. The plan addresses the University's space needs while reflecting Rutgers-Camden's educational mission through the physical relationship of programs and open space. These physical relationships symbolize desired collegiate and civic connections and facilitate the quality and frequency of campus interaction. The plan provides for the immediate needs of the University and creates a framework for achieving the long-term vision of the Rutgers-Camden community. 9

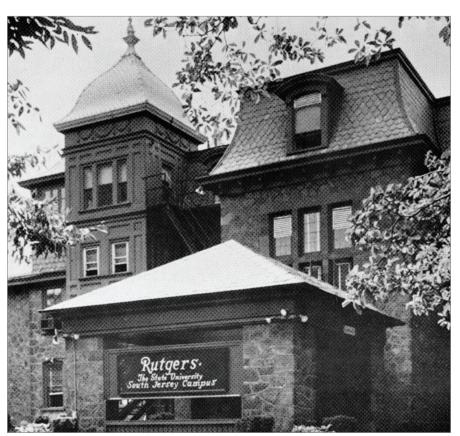
History and Physical Context











History

The roots of Rutgers University's Camden Campus date to 1926, when Collingswood businessman and Mayor Arthur E. Armitage, Sr., and a group of interested citizens established the South Jersey Law School. Classes were first held in the Ayer Mansion, the current home of Admissions. Soon the school began constructing buildings of its own. The following year, the College of South Jersey, a two-year undergraduate institution, was founded. These two units became a part of Rutgers in 1950.

Today, Rutgers-Camden is home to over 5,000 students and offers over 40 different programs of study, in addition to the Graduate School, the School of Business and the Camden School of Law.





Regional Context

Located in the city of Camden, the campus is in the transportation hub of southern New Jersey. At the crossroads of the Washington-New York and Philadelphia-Atlantic City corridors, the university community can access a wide variety of activities via multiple modes of transportation.

Rutgers-Camden is closer to center-city Philadelphia than most of that city's own universities. Independence Mall, the Liberty Bell and Independence Hall are easily accessible via mass transit as are many of the city's museums and other cultural venues.

In addition to the cultural and social activity of Philadelphia, the Camden Waterfront is developing into a entertainment center in its own right. The waterfront now offers the New Jersey State Aquarium, the Tweeter Center for outdoor concerts and performances, and Campbell's Field, home of the Rutgers-Camden Raptors and a minor league baseball team, as well. Future development plans include a hotel and conference center, a festival market area with retail shops and restaurants, and additional housing.

As the legal center of southern New Jersey and with an ever improving transportation system, Camden is situated to regain its status as a regional and commercial business center.





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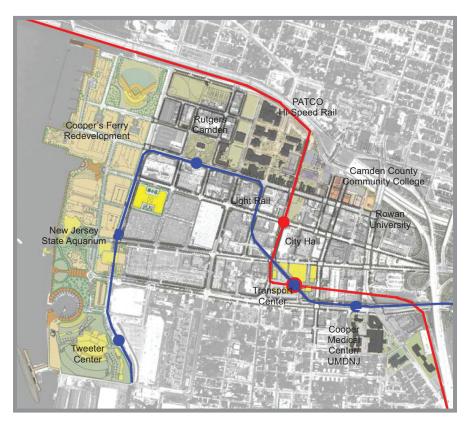






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rutgers university 2003 physical master plan



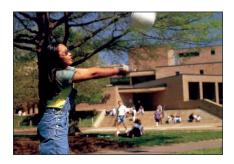
City Context

In addition to the regional draw of its waterfront entertainment venues, the city of Camden is embarking on a period of great transformation. Both state and local institutions have teamed up with the city to improve transportation, housing, and retail opportunities in and around the downtown.

Already well-served by the PATCO train line, the city of Camden has expanded its mass transit service with the addition of a new light rail line and transit center. The new line strengthens internal connections between the downtown and the waterfront and expands transit service to surrounding neighborhoods and municipalities.

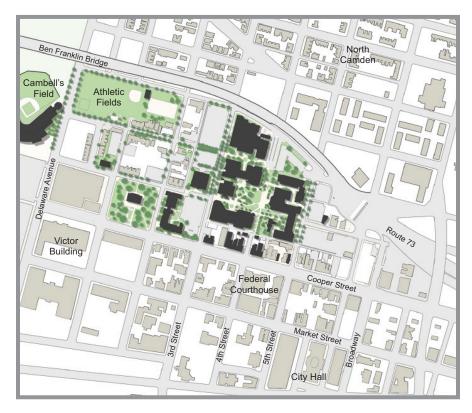
The Higher Education and Health Task Force has brought together the resources of Rutgers, Camden area hospitals, colleges, and other institutions to organize redevelopment and growth efforts of those institutions in the city. Employing over 2,000 city residents, the partnership continues to engage city residents through small business development, job training and community service.

As the anchor of the expanding 'Education Corridor' of Cooper Street, Rutgers has been instrumental in the creation of the L.E.A.P School and a future charter high school. Working with Camden County College and Rowan University, the University is in the process of completing a new University bookstore and a future mixed-use project on the south side of Cooper Street.





Existing Conditions



The existing Camden Campus is organized around the main quad or green. Academic and student activity buildings face the quad creating a quiet retreat from the bustling urban environment. Cooper Street is rapidly becoming the active face of the university with the renovation of historic structures, reconstruction of sidewalks, the addition of street furniture, and the introduction of faculty offices and classrooms. To the east and west of the campus, however, surface parking lots present less attractive approaches.

At present, faculty offices are too small. Though classroom and laboratory space is relatively sufficient, both could benefit from qualitative improvements. Indoor recreation facilities need improvement; a new fitness center to be located in the student center will help alleviate those needs. With only 500 students residing on campus and a minimum of social activity available in the city, the quality of student life suffers.

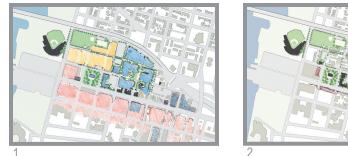
With potential university growth of up to 1,500 students by 2011, Rutgers-Camden will require an additional 300,000 gross square feet of space. Enhancing residential life will require an additional 580 beds. The land and parking capacity of the University will be tested with the expansion of the Law School and the potential growth of both the business school and the sciences. 15

Planning Principles and Strategies











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- 1 Use Zones
- 2 Expansion Zones
- 3 Open Space Connections
- 4 Edges and Gateways
- 5 Concept Plan





Concept Plan

The Rutgers-Camden Campus Plan provides for a collegiate environment that enhances the quality of life and education at the University and in the city of Camden.

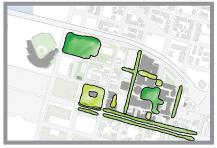
Specific initiatives include:

- Provide the necessary facilities and open space to "grow" the University in a handsome and efficient manner.
- Create inviting approaches and distinct gateways to the University.
- Increase connections between the University and other educational institutions with an 'Education Corridor' created through the continued acquisition and renovation of properties along Cooper Street.
- Strengthen residential life in and around the University by adding housing and the supporting market-rate housing in the Cooper-Grant neighborhood.
- Improve and expand the network of University quadrangles, courtyards, parks, and streetscapes.
- Manage and mitigate the impact of parking and vehicular circulation in and around campus through a long-term parking plan utilizing shared parking opportunities and minimizing the visual impact of parking decks on campus.

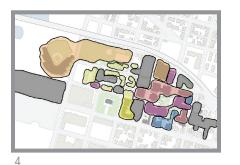




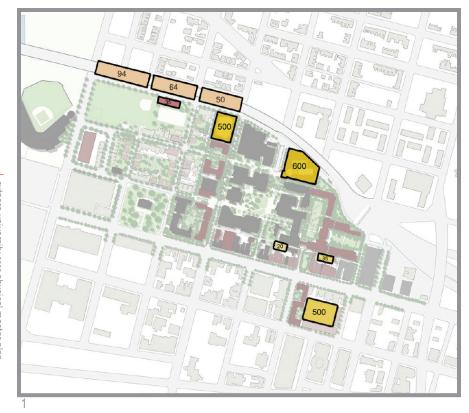
Campus Open Space and Program Distribution

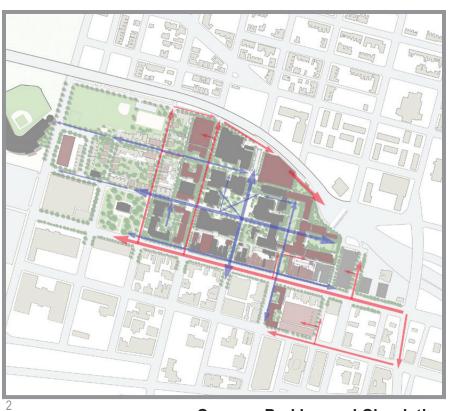


- 1 Proposed Program Distribution
- 2 Proposed Open Space Network
- 3 Existing Program Distribution
- 4 Existing Open Space Network
 - Open Space Implementation Streetscape Improvements Unrealized Open Spaces



Academic
 Administration
 Housing
 Athletic
 Student Support
 Parking/Service





Campus Parking and Circulation



- 1 Proposed Campus Parking Plan
- 2 Proposed Vehicular and Pedestrian Circulation
- 3 Existing Campus Parking Plan
- 4 Existing Vehicular and Pedestrian Circulation



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Existing Parking Resources/Vehicular Circulation
 Potential Leased Parking
 Potential Garage Parking
 Potential Public Parking/Pedestrian Circulation
 Vehicular Circulation
 Pedestrian Circulation

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Rutgers-Camden 2003 Campus Plan







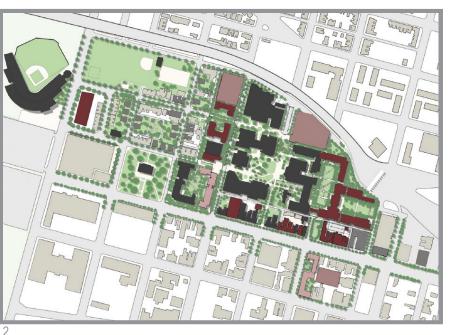
rutgers university 2003 physical master plar

Camden Campus

The lush vegetation of Rutgers-Camden's central quadrangle presents a visible symbol of the University to visitors approaching over the Benjamin Franklin Bridge. From the streets of downtown Camden, however, this image is more elusive. Parking lots and rundown buildings obscure the campus. Recent improvements by the University and the city of Camden, however, have reinvigorated the Cooper Street Historic District. The plan continues this effort and extends the University's development to its east and west edges. Two new quadrangles will improve connections to Camden County College, Rowan University, and the new University Bookstore on Cooper Street. The new spaces will provide a collegiate setting for the expansion of the law school, a new building for the business school, and other professional programs. To the existing housing, a new residence hall will be added to form a new residential quadrangle. Investment in the adjacent Cooper-Grant neighborhood will also boost University efforts to increase on campus community.

Identified Issues

- · Campus entries and edges are unclear and significantly made up of parking lots
- · Lack of sufficient on-campus housing is detrimental to campus community
- Insufficient faculty and departmental office space
- Poor connections between campus and recreation and athletic facilities



Proposals

- Replace surface parking lots with new buildings and quadrangles
- Create a series of portals along Cooper Street the provide easy and elegant entry to the campus interior
- Create new housing opportunities on and off campus
- Increase office space through the redevelopment of historic Cooper Street
 properties
- Establish landscape standards and extend their implementation to include all areas of campus

- Existing University Buildings
 Proposed University Buildings
 Proposed University Housing
 Proposed Parking Garages
 Partnership Projects
 Existing Non-University Buildings
- 1 Existing Plan
- 2 Proposed Plan



1

Rutgers-Camden

Existing Conditions: 900,000 GSF 470 Beds 1,360 Parking Spaces

Phase 1 (2007) adds: 200,000 GSF 250 Beds

Phase 2 (2012) adds: 100,000 GSF 330 Beds 140 Parking Spaces

Remaining Capacity: 600,000 GSF 250 Beds 300 Parking Spaces

Master Plan Capacity (2027): 1,800,000 GSF 1,300 Beds 1,800 Parking Spaces

Aerial of Camden Campus
 Rendering of Proposed Camden Campus

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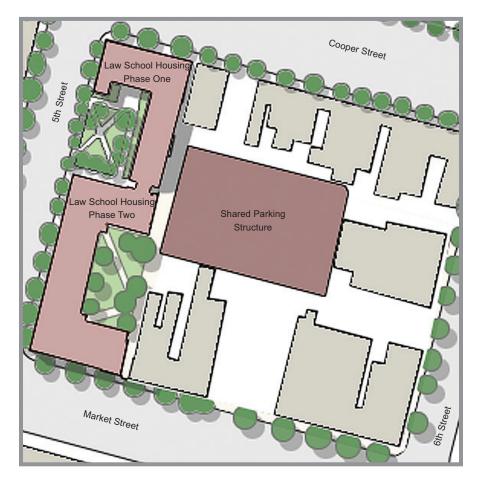


Law School Addition

The cornerstone of the campus east quad is the addition to the Camden Law School. The building should be developed to allow for the continued use of both 5th and Penn Streets, but it should not prohibit their removal and replacement with significant campus open spaces. Connection to the existing law school should occur at grade and via an overhead bridge. The bridge or archway should be of considerable visual prominence and provide a distinct threshold to the campus. A reserved law school parking lot is to be located behind the building adjacent to Lawrence Alley.

Two lawns will frame the law school. The first of these is the forecourt adjacent to 5th and Cooper Streets. The space should allow for easy visual and physical access to the law school and provide for a place of repose along Cooper Street. The second lawn is on the law school's north side. The planting of street trees will strengthen the axis under the law school library and act as a buffer between the new building and adjacent surface parking lots.





Law School Housing

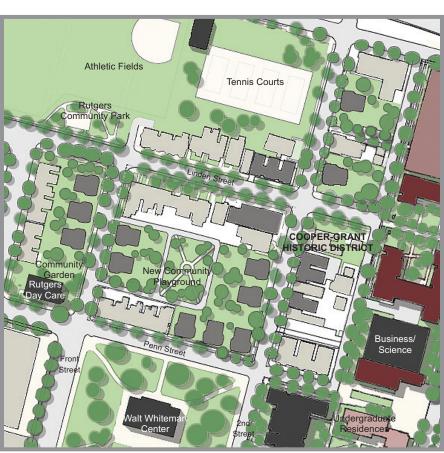
The new law student housing will be the first University building located south of Cooper Street. Situated between the law school, the Camden County Courthouse, and City Hall, the new facility connects these related uses. The building includes over 250 beds with retail space on the first floor. It promises to introduce much needed activity to both Cooper and 5th Streets. In phase one, a semi-public forecourt on 5th Street extends the network of university open space and creates a place of repose at the building's entrance. In phase two, an interior courtyard provides a quiet gathering space for the buildings occupants.

Anchoring the east end of the block is a potential Rowan University facility and interinstitutional building. Movement between the institutions and these facilities will greatly increase the activity along Market Street and improve the interaction between the institutions and downtown. A shared parking structure at the center of the block supports adjacent housing and educational functions, as well as the commercial activity along both Market and Cooper Streets.

Existing University Buildings
 Proposed University Buildings
 Proposed University Housing
 Proposed Parking Garages
 Partnership Projects
 Existing Non-University Buildings



rutgers university 2003 physical master plan



Market-Rate Housing

As part of its efforts to strengthen its surrounding neighborhoods. The University has dedicated a substantial portion of land in the Cooper-Grant Historic District for market-rate housing development. This neighborhood of Victorian Era row homes is perhaps the most desirable in Camden, thanks to convenient mass transit and significant park space. Empty lots and decaying sidewalks, however, still give the impression of a neighborhood in transition.

New housing will replace these lots. To maintain the neighborhood character, the housing will consist of attached units with Victorian proportion and detailing. Instead of long rows of townhouses, however, the new units will primarily be duplexes, each with a side yard and off-street parking. A new community playground will be built at the center of the 100 block of Penn Street. With additional improvements to the community garden and park, and the presence of the Rutgers Day Care Center, the neighborhood will become increasingly attractive to faculty, students, and staff.



Administrative Building

Linden Street

500 Car Parking Structure

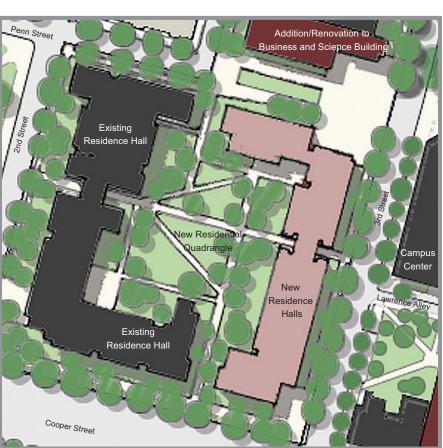
Upon the completion of the law school addition, no future development adjacent to the campus core can occur without the removal of University parking spaces. Though the lease of off-site space may be possible, the continued development of the waterfront will make these opportunities increasingly rare and cost prohibitive. At that point, the University will be required to construct its first parking garage. Located at 3rd and Pearl Streets, the garage buffers the core of the university from the noise of traffic entering on the Ben Franklin Bridge. Equidistant from both the Fine Arts Center and the Rutgers-Camden Community Park, the garage is ideally located to serve both cultural and athletic activities. The location also falls within a guaranteed parking zone for Campbell's Field which might make the project eligible for outside funding.

This location and the inclusion of office and administrative functions on the southern end of the garage also minimizes the visual impact of the structure on the neighborhood and the rest of campus. The office functions will enliven the path between the recreation center and the athletic fields.

Existing University Buildings
Proposed University Buildings
Proposed University Housing
Proposed Parking Garages
Partnership Projects
Existing Non-University Buildings

Campus Gymnasium



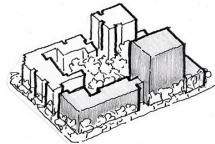


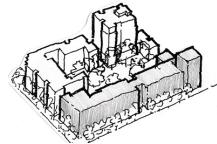
Undergraduate Housing and New Campus Gateway

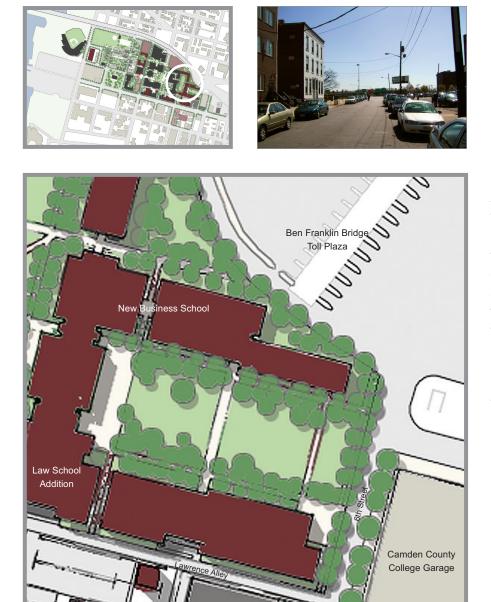
Additional undergraduate housing is needed to accommodate future growth and maintain a critical number of residential students on campus. Located adjacent to existing student housing, the new buildings strengthen the campus fabric through the creation of a new residential quadrangle. Sheltered from street activity, yet accessible from all four sides, the quad is a refuge from the city and the campus academic core. As such, the quadrangle becomes an important center of the undergraduate student community.

The inclusion of a community activity center at the north end of the space creates an indoor complement to the exterior activity of the quadrangle.

The new residential building and the new entrance addition to the Business and Science Building frame a significant campus gateway at the terminus of Penn Street.







New Business School

The business school currently shares space with the sciences on 3rd Street. Existing facilities will soon be in need of significant renovation. To accommodate the expanded needs of both programs, the business school will relocate to the eastern portion of the campus. Adjacent to the law school and closer to downtown and mass transit, the new location offers increased opportunities for interaction with the professional community. Framing two sides of a future quadrangle with the law school, the new building helps to create a graduate and professional center of the campus and enables the later development of shared conference and meeting facilities.

With improved landscaping on the northern side of the site, the building will present an attractive image of campus at a highly public entry point. New landscape improvements at the corner of 5th and Penn Streets reinforces connections with the law school and sets up the future East Quadrangle.

Existing University Buildings
Proposed University Buildings
Proposed University Housing
Proposed Parking Garages
Partnership Projects
Existing Non-University Buildings

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	2000	Facilities Needs 2000	2012	Master Plan Capacity 2027
Student Population	5,000	-	6,000	8,500
Building Area G.S. F. ¹	.9 M	1.1 M ²	1.2 M	1.8 M
University Beds	470	720	1,050	1,300
Parking Spaces	1,360	1,360	1,500	1,800

1 Does not include housing

2 Base on normative peers

Long-Term Growth

The long-term growth of the Rutgers-Camden campus focuses on the completion of the East and Penn Quadrangles and the infill of university-owned property. The majority of long-term campus growth will focus on additional academic expansion, but remaining building sites could also accommodate administrative functions and small research facilities.

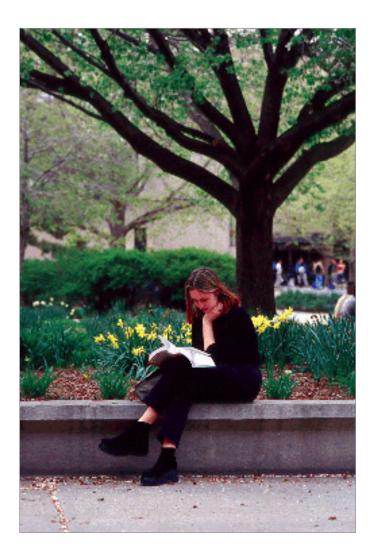
In total, the plan indicates a future growth potential of almost 900,000 square feet. With a total of 1.8 million square feet, the University could accommodate 8,500 students or increase its student-area ratio. This figure assumes a development density consistent to that of the existing campus. Desired growth beyond the area indicated in the plan will require either the revision of the proposed densities or the acquisition of new land.

Newark Campus









Prior to the creation of this updated campus master plan, Rutgers University engaged Paulien Associates in a comprehensive study of facility needs. The study determined the Rutgers-Newark Campus to have a research space deficit of approximately 100,000 gross square feet (gsf). The study also concluded the need for additional teaching laboratories. At Market Enrollment Growth, overall deficiencies would increase to 300,000 gsf by 2011. In addition to academic space, Rutgers-Newark has significantly less on-campus housing than the national average. The lack of sufficient university housing contributes to the campus's parking problem and detracts from the quality of student life.

The physical master plan provides for the fulfillment of existing University needs and future growth. The plan also addresses the physical quality of the campus through the improvement and extension of campus open spaces. New buildings are located to strengthen existing academic relationships and to further reconnect the campus to the city and neighborhood institutions. Of primary importance is clarifying and extending the New Street Corridor, connecting the University with NJIT, Science Park, and UMDNJ to the west, and Military Park, the central business district, and future waterfront development to the east. The plan creates the physical framework necessary for Rutgers-Newark to achieve both its educational and civic goals.

History and Physical Context









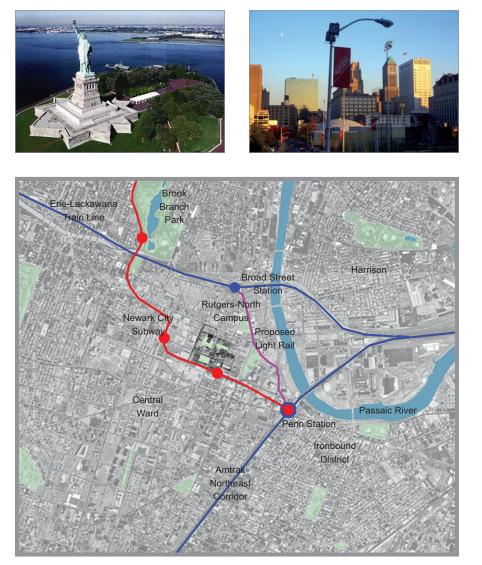


History

The current Rutgers-Newark began with the establishment of the College of Pharmacy in 1892. In 1935, five educational institutions in Newark - Dana College, the Newark Institute of Arts & Sciences, the Seth Boyden School of Business, the Mercer Beasley School of Law, and the New Jersey Law School united to become the University of Newark. The new University operated independently until 1946, when the New Jersey State Legislature voted to make the University of Newark part of Rutgers University.

In 1946, Rutgers-Newark was a collection of schools and buildings scattered throughout the city. In 1965, however, construction began at its current location as part of the first large-scale urban renewal project. During the next two decades, the school experienced marked growth in the sciences as well as other graduate and research programs. At the same time, the University has engaged the local community and encouraged growth and revival within the city.

Today, Rutgers-Newark is the most diverse national university in the country. Though originally planned as a small undergraduate branch of the University, it now offers a wide range of graduate programs and 14 doctorate degrees. Its partnerships and joint programs with the city and other institutions of higher learning have been an important part of the city's revival, particularly in the University Heights neighborhood.



Regional Context

Located in the largest metropolitan area in the country, Rutgers-Newark benefits from an unparalleled number of social, cultural, and commercial opportunities. Newark's location and mass transit hub are a gateway to area attractions: the Meadowlands, Liberty Science Center, and the Statue of Liberty. Just a few miles west of New York City, the Rutgers-Newark community is within reach of innumerable education, entertainment and business opportunities.

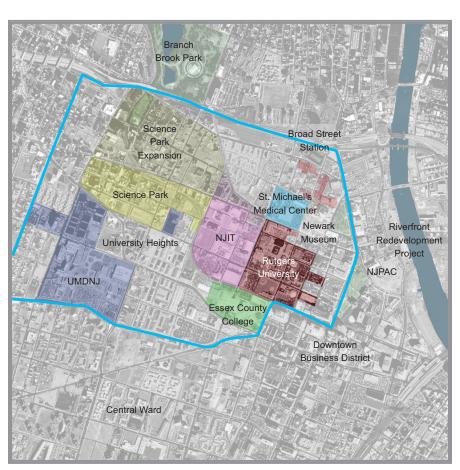
Rich in history, culture, and diversity, Newark is an education in its own right. It is home to a number of cultural institutions including the Newark Museum, Newark Symphony Hall, and the New Jersey Performing Arts Center. The city is also a center of business, law, and government with a number of Fortune 500 companies and a full range of federal, state, county and municipal courthouses. With the completion of Riverfront Stadium and the potential move of the Nets and Devils to the downtown, Newark will provide as much commercial, cultural, and entertainment opportunity as any city in the country.







rutgers university 2003 physical master plan





City Context

The character and mission of Rutgers-Newark is shaped by three important relationships: its role as a public state university; its location within the city of Newark, a revitalizing urban center; and its partnerships with other Newark higher education institutions. As a statewide institution, the University pursues a mission of education, research, service, and economic development.

Located in the largest city in New Jersey, this mission has become specifically suited to addressing the needs of Newark and the surrounding metropolitan area. Rutgers achieves these goals by continuing to be diverse, politically responsive, and committed to serve the state and the region.

As part of the Council for Higher Education in Newark (CHEN), the University works closely with the New Jersey Institute of Technology, the University of Medicine and Dentistry of New Jersey, and Essex County College. The four institutions have partnered together to create Science Park, a mixed-use research park development within the University Heights neighborhood. A 40 million dollar research center focused on infectious diseases has just been completed. A technology incubator and startup facility by NJIT is under construction. More than 20 new units of residential housing have been completed. In addition to development partnerships, over 1,600 students cross register in over 20 joint programs established between the institutions.



Broad Street Station Riverfront Stadium Newark Public Library ton Vewark Mused Broad Vew Jersey Performing Arts Center Military Park Essex County College

Existing Conditions

Despite its many advances, Rutgers-Newark has become a victim of its own success. Small land resources and high real estate prices inhibit growth and expansion. A major challenge for the University over the next few decades will be to expand its range of developing and financing partnerships. This will allow the University to engage developers to create mixed-use housing and other projects. It will reduce the need for expensive and often difficult property acquisition. In addition, these partnerships allow the University to concentrate its resources on the acquisition of land for the construction of new academic facilities.

Rutgers-Newark is currently engaged in the design of a new science building; open space improvements; and is soon to enter a public-private partnership to build new University housing. Preliminary studies have been conducted and sites identified for the expansion of housing, athletics, the student center, and the library. The University is looking to expand to the east on New Street via more developer partnerships and selective acquisition. The maintenance, improvement, and expansion of parking facilities is also of great importance.

Planning Principles and Strategies









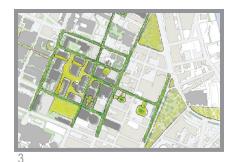


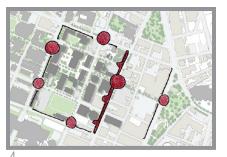
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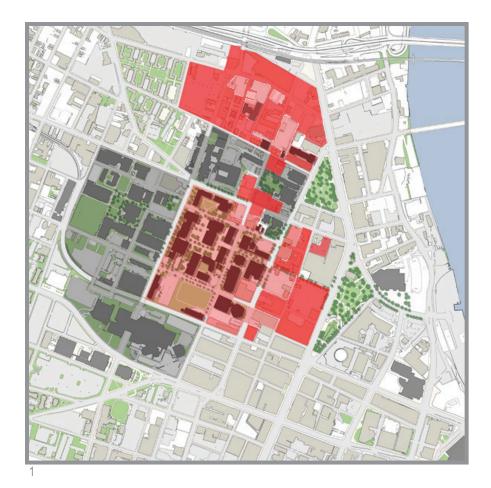




Concept Plan

The Rutgers-Newark Campus Plan cultivates an environment of intellectual and community interaction between the University, adjacent institutions, downtown Newark, and the surrounding neighborhoods. Specific initiatives include:

- Provide the necessary facilities and open space to grow the University in a handsome and efficient manner.
- Create distinct gateways, pedestrian connections, and 'outward' oriented architecture to strengthen connections to downtown and surrounding neighborhoods.
- Increase cooperation and connection with CHEN and other institutions through interdisciplinary programming, shared facilities, and shared support systems.
- Strengthen residential life in and around the University through public-private partnerships along New and Halsey Streets, in the James Street Historic District and Science Park.
- Improve and expand the campus open space with the creation of pleasant streetscapes, quadrangles, forecourts, inviting lobbies and atriums.
- Create a long-term parking plan that adds necessary resources and emphasizes shared parking opportunities with neighboring institutions in and around campus.
- Conserve valuable land resources through the future construction of taller, denser facilities.



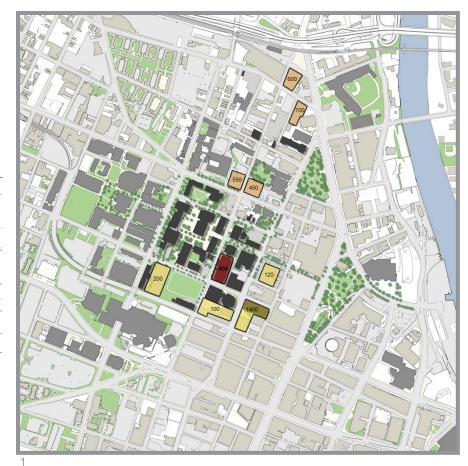


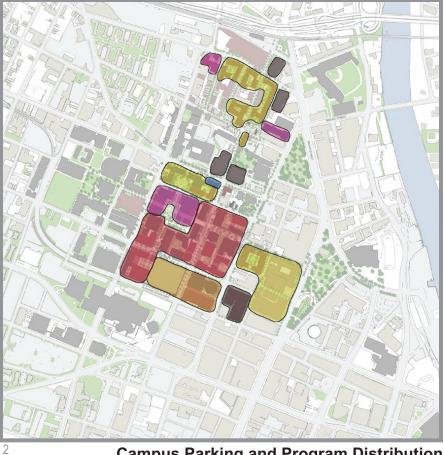
Campus Districts and Open Space Connections



- 1 Property, Partnerships, and Zones of Interest
- 2 Proposed Open Space Network
- 3 Existing Campus Boundaries
- 4 Existing Open Space Network
 - Zones of Interest
- Current Boundaries
 - Adjacent Institutions

- Recent Open Space Implementation
 Recent Streetscape Improvements
 Unrealized Open Space
 Major Lobbies and Atriums
- Campus Gateways





Campus Parking and Program Distribution

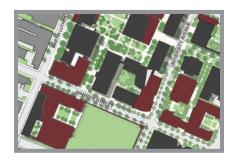


Academic Administration Housing Athletic Student Support Parking/Service

- - 1 Proposed Campus Parking Plan 2 Proposed Program Distribution
 - 3 Existing Parking Plan
 - 4 Existing Program Distribution
 - Existing Parking Resources
 - Potential Shared Parking
 - Potential Garage Parking

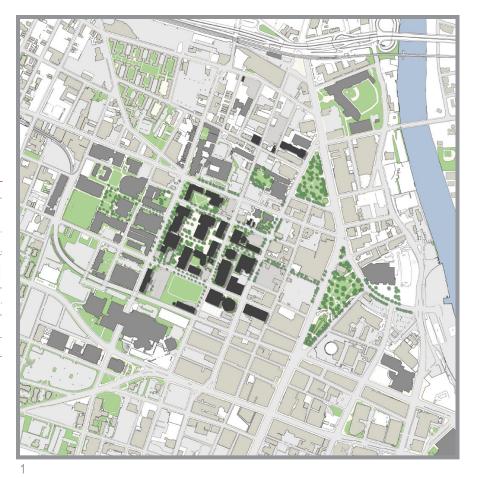
46

Rutgers-Newark Campus Plan









Newark Campus

Located closest to downtown of Newark's four principal institutions of higher education, improvements to Rutgers-Newark has the responsibility to provide for the University's academic growth as well as to improve connections to downtown. The plan aims to achieve these goals by creating public private partnerships, improving adjacent and campus land use, and increasing the quantity and quality of campus open space. New Street becomes an even more critical corridor of open space through the campus. Improvements along Martin Luther King Jr. Boulevard will create a more open and inviting border to the campus. Additions and renovations to the Paul Robeson Student Center and Dana Library will complement the open space improvement already underway for Norman Samuels Plaza. New housing, parking, and retail development will be added between the campus and Military Park. The James Street Historic District will also be the focus of new housing development and shared parking facilities. The devolution of housing and support services from the campus's core not only bolsters the recovery of adjacent neighborhoods, but also allows room for the expansion of critical academic disciplines. New facilities for life sciences, economics, and other disciplines will provide new office, classroom, and laboratory space.

Identified Issues

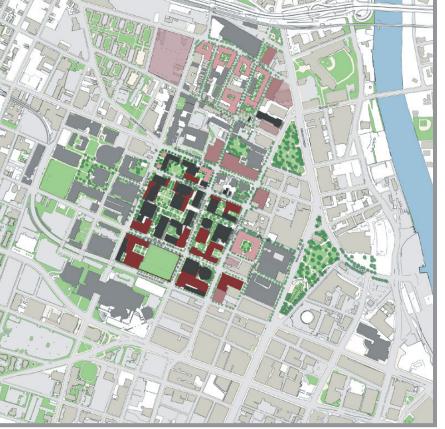
- The campus lacks a robust open space network for students and faculty to casually interact
- Facility expansion is difficult due to the University's limited property and limited acquisition opportunities
- The existing character of campus edges and buildings is coherent, but often uninviting and 'institutional'
- · Limited housing and parking options

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Proposals

- Improve entries and edges through the addition and orientation of new buildings and open spaces to the surrounding community
- Continue renovations to Norman Samuels Plaza and other campus spaces to create increasingly attractive and functional campus spaces
- Work vigorously with the city, neighboring institutions, and private partners to build new housing and improve parking and transit opportunities
- Seek to acquire or influence the development of properties that reinforce the goals of academic growth and neighborhood improvement
- Construct new facilities of a quality and character that equals the achievements and aspirations of the academic mission
- Continue the strong heritage of outreach and interaction with the city of Newark. Improve the physical connections between the University and the city to support this interaction







Existing University Buildings
 Proposed University Buildings
 Proposed University Housing
 Proposed Parking Garages
 Partnership Projects
 Existing Non-University Buildings

1 Existing Plan

2 Proposed Plan

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Rutgers-Newark

Existing Conditions: 2,000,000 GSF 700 Beds 2,400 Parking Spaces

Phase 1 (2007) adds: 100,000 GSF 1,200 Beds 400 Parking Spaces

Phase 2 (2012) adds: 200,000 GSF 1,600 Beds 300 Parking Spaces

Remaining Capacity: 1,100,000 GSF 1,500 Beds 500 Parking Spaces

Master Plan Capacity: 3,400,000 GSF 5,000 Beds 3,600 Parking Spaces

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Aerial of Newark Campus
 Rendering of Proposed Newark Campus



5 newark - 2003 campus plan





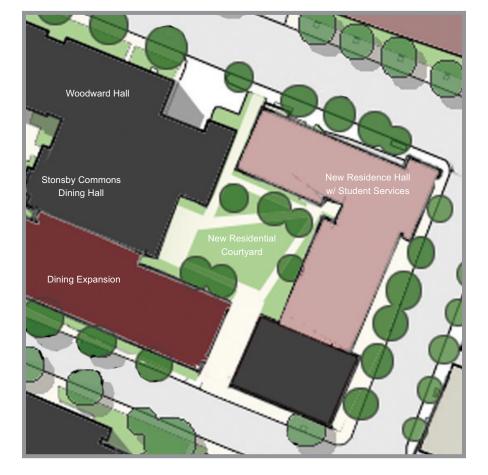
Life Sciences Building

The first phase of the Life Sciences Building is an addition to the eastern end of Olson Hall. The 60,000 gsf facility will include two teaching labs, 15 research labs and additional faculty office and conference space. Though the University will initially occupy only the basement and the first four floors, the building will be built to six stories in order to maximize the development potential of the site.

Upon the completion of the second and third phases, the Life Sciences Complex will complete an internal loop connection between all Rutgers-Newark science facilities. The atrium space at its center will serve as a gathering space for the scientific community. Prominent entries on both the Science Courtyard and University Avenue, will provide these programs with an appropriate front door and enhance the University's open space connections.

Existing University Buildings
Proposed University Buildings
Proposed University Housing
Proposed Parking Garages
Partnership Projects
Existing Non-University Buildings





Housing and Student Services

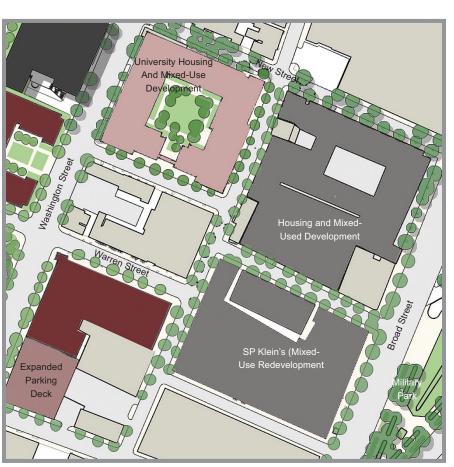
A major part of improving the quality of student life at Rutgers-Newark is the addition of University housing. The addition of a new residence hall will add over 600 beds to the existing University housing capacity. Adjacent to the Talbott and Woodward residence halls, the new building will solidify the University's existing residential neighborhood. The two halls define a small interior courtyard similar to that created by the additions to Talbott Hall.

The new residence hall frames a campus gateway at the corner of Central and University Avenues. The inclusion of 50,000 gsf of student service space makes these services easily accessible to students and increases pedestrian activity along University Avenue.

The building on Bleeker Street is an 8,000 gsf addition to the Stonsby Commons Dining Hall. It allows for movement between the street and the interior courtyard and frames the corner of the main residential quad in front of Talbott and Woodward Halls.

Existing University Buildings
Proposed University Buildings
Proposed University Housing
Proposed Parking Garages
Partnership Projects
Existing Non-University Buildings





University Housing and Mixed-Use Development

When accessed via New Street, the downtown is only two blocks from the Rutgers-Newark campus. The street, however, benefits from only a small amount of retail activity. As a result, the perception is that the downtown is much more distant. These vacancies present a tremendous opportunity. The introduction of new housing and mixed-use development along this corridor will strengthen the connection between the University and the downtown. New residents will engage New, Halsey and Broad Streets and Military Park. These residents, part of a 24-hour community, will create both the perception and reality of safety to the neighborhood.

The first site to be developed is at the corner of Washington and New Streets. The ground floor will include retail shopping and potential University office space. Structured parking will be surmounted by an elevated courtyard with apartment units facing both the street and the courtyard on upper levels. Its proximity to the School of Law and the Business School makes it ideal housing for graduate students.





Executive Development Center

The addition of the Executive Development Center will provide expanded space for the Rutgers Business School. Its location at the corner of Bleeker and Washington Streets replaces a surface parking lot and improves the university's presence on the street. A forecourt announces a new entry and atrium space that connects the Executive Center with the Management Education Center. The space will serve as both a formal and informal gathering space for the Rutgers Business Community.

In addition to the Executive Development Center, Ackerson Hall will also undergo an addition and renovation. The linear addition along Bleeker Street will provide classroom space to replace that lost with the eventual removal of the Ackerson Auditorium. A new courtyard will complete a mid-block connection from Warren to Bleeker Streets

- Existing University Buildings
- Proposed University BuildingsProposed University HousingProposed Parking Garages
- Partnership Projects
- Existing Non-University Buildings





Paul Robeson Campus Center and Dana Library

Expansion of and addition to the Paul Robeson Student Center and Dana Library presents a tremendous opportunity for the Rutgers-Newark Campus. With the creation of the New Street Plaza, the University has strengthened its most important physical connection to the downtown. Unfortunately, both the student center and the library currently disrupt the extension of the New Street Corridor from reaching the Norman Samuels Plaza and the NJIT campus. The location of the buildings, however, enables them to engage the corridor in a direct way. Programs located in these buildings will benefit greatly from the high volume of student traffic.

Additions to the west and east entrances of the student center will provide additional space and create open and inviting building facades. The introduction of a central lobby will strengthen connections between Samuels Plaza and Martin Luther King Jr. Boulevard and provide a prominent gathering space for facultystudent interaction.

Like the student center, the library will allow for public circulation on the ground floor. This interior 'street' would connect computer labs, study lounges, and other active student functions. The entrance to the library would be located in such a way as to control access to the reading room and stacks on the upper floors. This addition to the library will address short-term needs. Further research could explore the possibilities of a joint Rutgers/NJIT library to address long-term growth.





University and Market-Rate Housing/Parking

The James Street Historic District is one of Newark's oldest neighborhoods. Though it still contains many historic homes and prominent civic buildings, the majority of the neighborhood is composed of parking lots. Crumbling sidewalks and empty streets belie its recent history of urban decay.

The plan will aid the neighborhood's revival through support of University and market-rate housing. The construction of row houses on Burnett, Eagles, and Essex Streets will form the core of the residential neighborhood. Larger courtyard apartment buildings and small retail spaces will be located along the more busy Orange Street and University Avenue. New parking structures at the corners of Orange and University and Orange and Essex will accommodate lost surface parking adjacent to the intense business uses along Broad Street.

The inclusion of small institutional or academic functions at the corners of Orange and Martin Luther King Jr. Boulevard and Orange and University will encourage involvement of the Rutgers community in the neighborhood. The buildings also add a University presence at two important entries to campus.

Existing University Buildings
 Proposed University Buildings
 Proposed University Housing
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 Existing Non-University Buildings





Shared Parking and Transportation

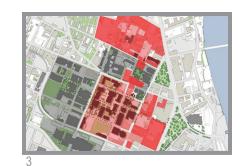
Even without further growth, Rutgers-Newark suffers from limited parking. As new buildings replace surface parking, this problem will become acute. In addition to continuing to develop its own parking infrastructure, the University will seek opportunities to share off-site parking in the surrounding neighborhood. The strategy will help preserve Rutgers-Newark's land resources and limit the adverse effects that could result from a parking plan of limited scope.

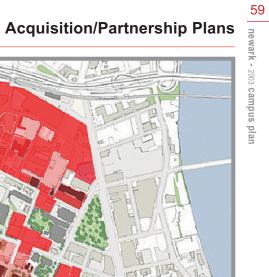
Both St. Michael's Medical Center and the Newark Museum have limited land resources and considerable parking demand. Structured parking at the corner of Central and University Avenues will serve the needs of all three institutions. Flexible office space on the ground floor will enliven the northern end of University Avenue and strengthen the connection to Broad Street Station. With a significant increase in parking spaces from these new facilities, Parking Deck 1 could become a potential site for academic expansion, if existing spaces can be replaced.

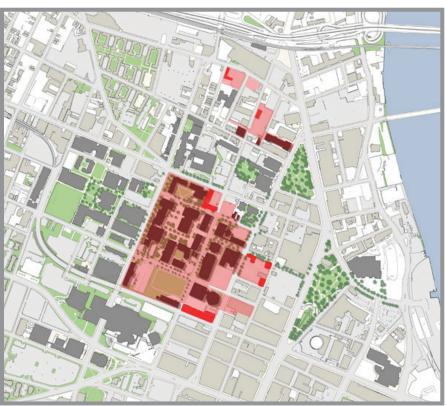
In addition to addressing short-term parking needs, the campus will also need to develop strategies to encourage public transit as an alternative. Several options include: transit incentives, park-and-ride facilities at the campus periphery, and more frequent shuttle service to train and subway stations. As the campus continues to grow, maintaining a pedestrian-oriented urban campus is a high priority.

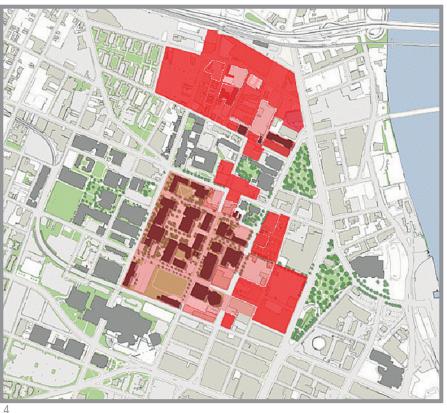


- 1 Existing Campus Boundaries
- 2 Short-Term Acquisition
- 3 Partnership Zones
- 4 Long-Term Partnerships
 - Desired Acquisitions / Zones of Interest
 - Current Boundaries
- Adjacent Institutions









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	2000	Facilities Needs 2000	2011 ³	Master Plan Capacity
Student Population	9,200	_	11,000	14,500
Building Area G.S. F. ¹	2 M	2.1 M ²	2.3 M	3.4 M
University Beds	700	1,900	3,500	5,000 ⁴
Parking Spaces	2,400	2,800	3,100	3,600 ⁴

1 Does not include housing

2 Base on normative peers

3 From 2001 Paulien Report

4 To be built on-campus and in Zones of

Interest through public/private partnerships

The 2001 Paulien Report projected a population of 11,000 in the year 2011. However, based on the current growth enrollment pattern, the 2012 projected population should be revised to 14,000.

Long-Term Growth

In addition to academic space, recreation, fine arts, and the law school have been identified as potential programs with long-term growth needs. The long-term development of the Rutgers-Newark campus reflects a potential build-out of the University's property. Assuming the new campus buildings are added at a greater density than those of the existing campus core, the University can grow to 3.4 million gsf. Long-term projects account for over 1.1 million gsf of the new campus growth. At current student-area ratios, this would allow an increase of the University population to 14,500. Significant research expansion and the increase in the amount of space per student will alter this number significantly. Desired growth beyond the area indicated in the plan will require either the revision of the proposed FAR or the acquisition of new land.

New Brunswick/Piscataway Campus











Introduction

Since World War II, Rutgers University has experienced unprecedented expansion. Over the last four decades, the New Brunswick/Piscataway Campus has grown by 9.2 million gross square feet (gsf) from 3.3 to 12.5 million gsf. This equates to an average of 37% or 2.3 million gsf per decade. In the last 10 years, enrollment has risen 10% to 35,886. Over the same period of time, research dollars have increased 210% to 242 million dollars in 2002. In the last decade, however, the University has only built 1.2 million gsf. In order to redress its divergence between program and facilities growth, the University engaged in a comprehensive study of its facility needs. The study, conducted by Paulien Associates, found the New Brunswick/Piscataway Campus to have existing deficiencies of over 280,000 gsf. Market growth scenarios for 2011 predicted an additional space need of almost 1.7 million gsf. Research space accounts for the majority of space needs while student activity and recreation space was also found to be insufficient. Benchmark analysis of premier public research universities also showed significant deficits in classroom and teaching laboratories. In addition to lack of space, it should be noted that much of the existing space suffers from outdated configurations and serious deferred maintenance issues.

In 2002, the University began a process to reevaluate and reorganize its physical resources to better achieve this goal. Through a series of committee meetings, the planning team analyzed the existing campus buildings and grounds, program distribution, movement systems, and previous campus plans to outline a series of overarching goals. These goals became the backbone of the campus's planning principles. In turn, the principles guided the decision process throughout the design of the plan. Multiple schemes and organization structures were tested

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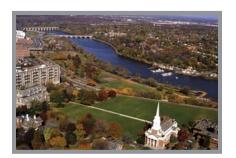
through a series of workshops and public forums. The end result is a plan that provides for the immediate needs of the University within the parameters of a strong long-term vision. Recent budget cuts and proposals for the restructuring of New Jersey's higher education system have underlined the importance of a framework to guide the University's physical growth. The inauguration of a new administration in February of 2003 has galvanized this effort.

The greatest challenge to planning at the New Brunswick/Piscataway Campus is the comprehension and illustration of the University in its entirety. The primary objective of the plan and its implementation is to unify the University's numerous centers into a cohesive educational environment. Themes of identity, community, and connectivity have continually guided the process. Simultaneously, individual attention has been placed on the unique development, mission and physical character of the secondary campuses and colleges. This document attempts to mirror the planning process by first addressing the campus as a whole while also focusing on its many components.

History and Physical Context







History

The physical layout of Rutgers University is closely related to its history. In New Brunswick and Piscataway, the University has grown from a collection of small colleges to an expansive network of academic, residential, and research clusters, each with its own distinct development pattern and landscape organization. Distinct among American universities, Rutgers' campus heritage is a lesson and a laboratory of over 200 years of college and university planning. Landscapes and buildings that may seem familiar in isolation are extraordinary in their collection. It is this planning tradition that will be the focus of our history.

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Rutgers College, College Avenue Campus

For the first four decades of its existence, Queen's College (as Rutgers was originally named in 1766) more closely resembled Oxford of the 14th century than a modern university of today. Students and instructors would meet in taverns, boarding houses, and private homes – when not disrupted by war, politics, or money – to study. In many ways, Rutgers was the definition of college: a body of persons having common purpose or common duties. The College received support from the Dutch Reformed Church, and its all male student body dedicated themselves to preparing for life in the clergy. Lack of funding, political wrangling within the church, and limited enrollment forced the college to close temporarily in 1795 and again in 1816. In the interim, funds were secured to begin construction of a college building on land acquired from the family of James Parker consisting of five-acres bounding Somerset and George Streets, the present site of the Queen's campus, where the architectural plans of John McComb were to be realized.

The college was originally laid out similar to other American colleges (Harvard, Princeton), a single building, elegant in proportion, common in material, and facing the town New Brunswick. The building was set at the highest point of an open field with its boundaries delineated by a low fence. For much of the 19th-century the college's relationship to the town and the landscape remained the same. New buildings built of the local "brownstone" were placed astride of Old Queen's in a row along the ridge similar to other liberal arts colleges of that period (Wesleyan University). By 1864, the college had severed its ties with the church and closed the century as an independent private college.

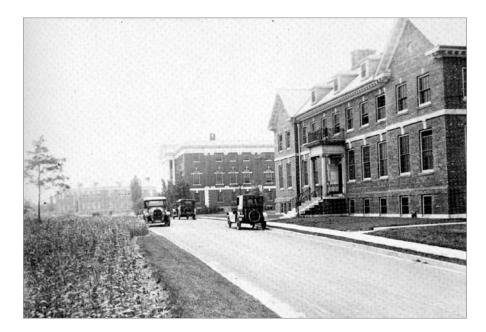
By the early 20th century, the City of New Brunswick had grown considerably and the college was subsumed within a grid of streets. Partly from the grid

imposed structure and influenced by the City Beautiful movement and the Beaux-Arts campus plans of the 1910s (Johns Hopkins University, Carnegie Melon University, University of California - Berkeley), the College grew north from the Queen's Campus along Bleecker Place. Organized along a tree-lined axis between Old Queen's and the New Brunswick Theological Seminary, the new academic guadrangle formerly named Neilson Campus and now known as Voorhees Mall. Further north, new dorms were erected on what was then known as the Bishop Campus. The dorms (Leupp, Pell, Hegeman, and Wessels) enclosed a small courtyard closed to the street and open to the existing estate house (Bishop). Through the expansion of the 1920s, the college grew from a small cluster of academic buildings to a full service institution with dormitories, a gymnasium, administrative offices and other support buildings anticipating its future transformation. In 1924, Rutgers College became a university following the establishment of the New Jersey College for Women (Douglass College) in 1918, and the transformation of the College of Agricultural (Cook College) in 1921, setting the stage for the next phase of growth.

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Cook College

With the passage of the Morrill Act in 1862, Congress provided federal money to support the study and research of agriculture and the mechanic arts in each state. With the assistance of faculty members George Hammell Cook and David Murray, the New Jersey State Legislature awarded the land-grant status to Rutgers College and its Scientific School in 1864. For a long time, Rutgers, as the land-grant institution, was nothing more than an agricultural extension of Rutgers College. Thus, despite being awarded the status of New Jersey's land-grant college, the Rutgers Agricultural Extension developed slightly different than that of other land grant institutions. Though the College Farm existed since 1862, the first significant building was not constructed until 1906 (Waller Hall). Even then, over 40 years since its designation, the agricultural school resembled more a large farm than an educational institution. It was the transformation of agricultural instruction, extension and short courses, and the expansion of the agricultural experiment station that spurred the significant growth of the 1920s. During that period, when Rutgers formally established the College of Agriculture, farm buildings were twice victims of devastating fires. The third time they were rebuilt, they were relocated from their original sites (along Nichol Avenue) to their current location off College Farm Road. In their place, the College erected a series of new academic buildings in a wide arc surrounding the existing experimentation fields and the watering pond. In the 1940s, the last of the fields was moved out of the academic core and the traditional collegiate landscape around what is now known as Passion Puddle was created. Though its larger scale and looser geometry is similar to that of many other land-grant colleges, the lack of large residential facilities was a significant detail.

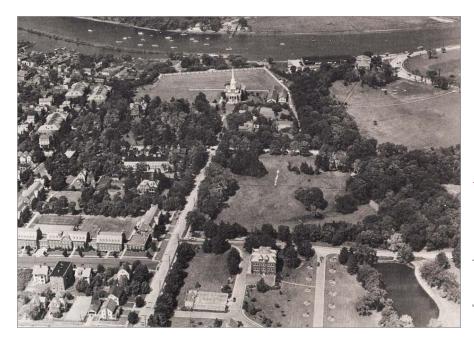


It was not until the 1970s that Cook College became a true residential college. New housing, student dining and recreation facilities differed greatly in placement and construction from the College's academic core. The new facilities were often of lower density and dubious spatial order. This geographical and qualitative disparity, driven partly by modern planning and increasingly by the accommodation of the automobile, resulted in a mixed identity for the College. Whereas the housing and student activity areas are clearly associated with Cook, the more mature landscape of the academic core is often confused with adjacent Douglass College. Despite the encroachment of the automobile and its attendant asphalt, much of the College lands are still rural and agrarian in character.

Douglass College

Established in 1918 as the New Jersey College for Women, Douglass College is now the largest women's college in the United States. Similar to the College Avenue Campus, the new women's college grew through the acquisition of several large estates. These estates (Carpender, Cooper, Neilson), separated by both road and ravine, contributed greatly to the multi-campus development of Douglass College. As a result, the development of Douglass was closely linked to the surrounding landscape. Along with the lawns and gardens of the existing estates, the ravine, the steep slopes down to the Raritan River, and the edge of the New Brunswick defined the extents of the campus.

These natural and man-made landscapes served as an armature for campus growth during the 1920s. The large and often disconnected properties encouraged a lower density of construction, but placed a high value on the quality of the paths and open space that connected them. The first expansion beyond College Hall occurred across George Street. Cooper Residence Hall and Federation Hall classroom building flanked a loose axial connection between the College Hall/Antilles Field Campus and the new Jameson Residences. Throughout its development, Douglass College followed a distinct spatial arrangement based upon building use. Residential campuses (Jameson, Corwin, Gibbons) all create private courtyard spaces. The inward focus of these dormitories was important in creating community (they often included recreational activities), but also in distinguishing the realm of the College from the city and the landscape. (Jameson, as the most urban residences, is also the most enclosed; Gibbons, the least.) Unlike the cloistered dormitories, the College's prominent



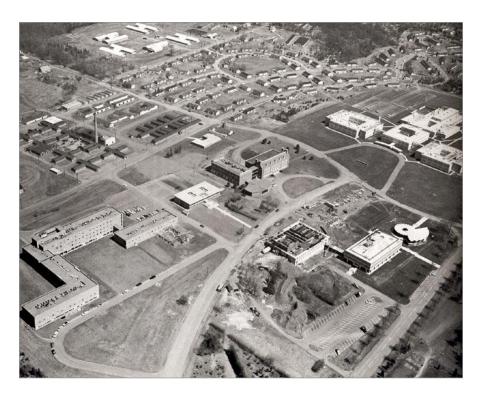
buildings all create strong urban gestures. College Hall, sited back from George Street and backed by Antilles Field, marks the intellectual and academic center of the Douglass Campus. The Douglass Student Center on the corner of George Street and Nichol Avenue embodies the physical and activity hub of the College. Most visible is Voorhees Chapel. Ending the axis of Nichol Avenue and rising high above the Raritan, the chapel is the symbolic heart of the campus. Lastly, academic buildings are organized so as to define the spaces between. 70

rutgers university 2003 physical master play

Rutgers College, Busch Campus

The development of the Busch campus is one of both foresight and opportunity. Beginning with the acquisition of land in 1935 and the relocation of Rutgers Stadium to the site in the same year marked the first expansion of the University beyond New Brunswick. Despite little initial development on the campus, the end of World War II and the designation of Rutgers as the State University of New Jersey resulted in a building boom. The rapid development of the Busch Campus over the last 50 years exemplifies the growth of most state universities after World War II. In an effort to address the rapid enrollment growth and the increasing importance of scientific research on what was originally called the University Heights Campus, the University embarked on the first of several master plans for the area. The 1947 Plan by York and Sawyer created a Beaux-Arts inspired campus that aligned proposed buildings east-west along an arcing ridge. The first two buildings (Waksman, Wright Chemistry) were of Georgian architectural inspiration and place at either end of the academic precinct. Whereas Wright Chemistry's simple massing and moderate scale were designed to be one part of a new academic quadrangle, Waksman's role as the primary research and administration building determined its greater scale and more imposing architecture. Located at the western most edge of the new campus, it also related back toward the University's origins, creating a visual axis back to College Avenue.

The immediate needs student housing (enrollment swelled from 750 in 1945 to 4,200 in 1947), however, required the reuse of many temporary modular buildings from nearby Camp Kilmer. After the 1950s, the renewed expansion of scientific research facilities on the campus followed three new campus plans. All three



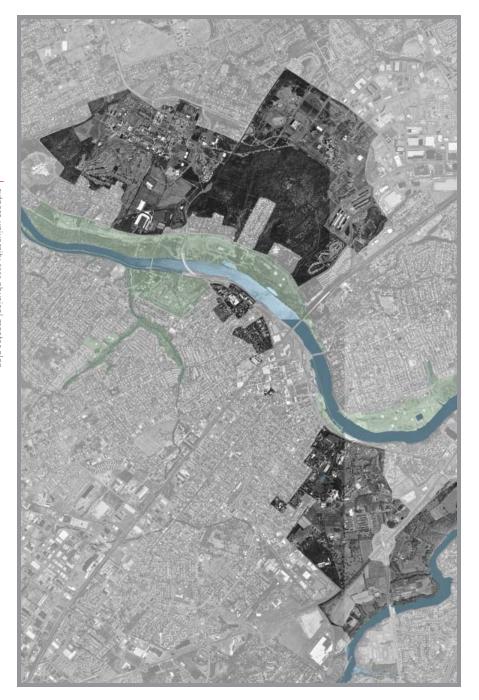
shifted the campus growth toward a pattern of lower density and automobile circulation. Major education bonds passed in the 1960s, 70s, and 80s solidified Busch campus as the center of Rutgers, the public research institution. Academic and research space doubled and the campus began a significant expansion of on-campus housing built to support the residential colleges.

Throughout its entire history, the Busch Campus has been as dynamic in vision as in research, but the absence of a strong spatial organization and a preponderance of temporary structures leave no dominant image to focus its widespread facilities. The varied architectural expression, building size, and orientation contribute greatly to the lack of integration and identity of the current campus. Though rich in land and facilities, the Busch campus requires significant open space improvement and architectural consistency to create a physical identity worthy of its academic standing.



Livingston College

Livingston College opened in 1969 as Rutgers University's first co-ed liberal arts college. Built on land acquired from the army in 1964 (Camp Kilmer), the site was originally planned to contain three separate residential colleges. Though built rapidly during it first few years, lack of funding and unrealized enrollment growth resulted in the elimination of two of the colleges. This ambitious start and circumvented growth is responsible for much of Livingston's campus character today. Unlike the other campuses, the architecture at Livingston (having been built in a short period of time) is of similar style and material. Lacking in architectural variety and spatial hierarchy, however, the campus is often perceived as cold and institutional. This is further troubled by the unrealized building projects, incomplete landscape, and preponderance of asphalt between the distant buildings. Though the additions of the Livingston Student Center and the Rutgers Business School have improved upon this image, the campus requires much more development to a density comparative to the other New Brunswick/ Piscataway Campuses. Though its isolation has resulted in the development of a strong academic college identity, its physical qualities fall far short of the rich social diversity it prides itself upon.





Regional Context

Located at the geographic and transportation center of New Jersey, Rutgers-New Brunswick/Piscataway is easily accessible by road and by rail from much of the state - well situated to serve its needs. The Northeast Corridor Rail line connects to both New York and Philadelphia, as well as the state's political and commerce capitals of Trenton and Newark. New Brunswick and Central Jersey is home to some of the countries leading biotech and pharmaceutical firms. Robert Wood Johnson University Hospital, Saint Peter's Medical Center, and the University of Medicine and Dentistry of New Jersey drive an ever growing medical sector. Beyond these numerous business opportunities, the region is also home to a wide array of recreational activities from dining and the arts to minor league baseball, NCAA Division I intercollegiate athletics and the Jersey shore.

In more ways than one, the Rutgers University New Brunswick/Piscataway Campuses are a region unto themselves. Spread over 2,200 acres and located within multiple municipalities, the campuses range from urban to rural in character. As a result, its potentials and problems echo those of the metropolitan region: continued growth, transportation needs, and urban revitalization. Coupled with its surrounding cities and institutions, these issues become even more critical to the future quality of life in the area.



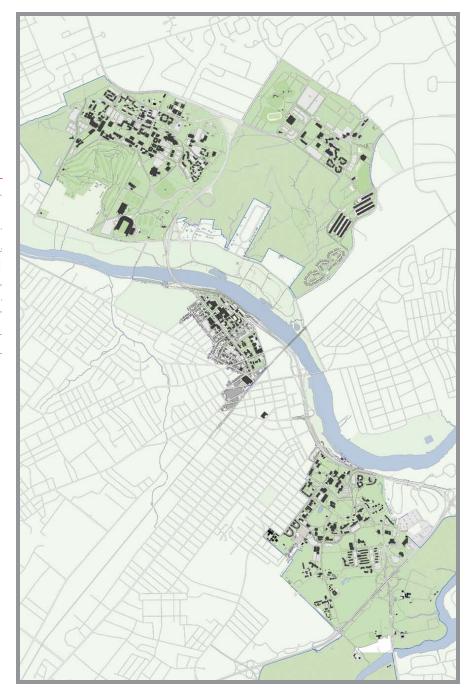


City Context



Beyond the regional opportunities for the Rutgers community, the local context of the University campuses offers an array of living choices. The bustle of downtown New Brunswick differs greatly from the suburban quiet of Piscataway. New Brunswick is wedded to Rutgers by the city street grid. Edges of city and University often intertwine offering students and residents the cultural and social benefits of a robust urban community. A city of approximately 50,000 residents, New Brunswick's allure is further enhanced by its three acclaimed theaters and diversity of bars and restaurants. After several years of substantial growth, the city is aggressively implementing it own master plan. The construction of new Hope VI housing units and the introduction of market-rate housing between downtown and the river promise to strengthen its residential communities. The redesign and clean up of Boyd Park and the Raritan riverfront paired with planned improvements to Route 18 will make accessibility to these amenities both possible and desirable.

Connections between Busch and Livingston and Piscataway are achieved through regional road and contiguous open space. The city's municipal center and neighborhoods remain largely apart from the Rutgers campus, the University's borders being largely defined by city and county parks and its own ecological preserve. A desirable community representative of New Jersey's diverse cultural groups, the Piscataway/Highland Park area continues to grow. With so much potential growth, continued integration and cooperation between Rutgers University and its surrounding communities are important to establish greater physical connection and increased public partnership between city and campus.





Existing Conditions

The multi-campus organization of Rutgers University is one of it greatest assets and potential challenges. Its various locales offer a wide variety of public spaces and landscapes. Landscaped courtyards and quadrangles define the academic center of each campus. Residential areas are typically located near the campus periphery. These residential communities are usually connected to the academic cores by paths and sidewalks, but often fall short of a quality walking experience. Underutilized and poorly maintained pedestrian connections and open spaces contribute to the perceived distance and separation of campus buildings and spaces. In addition, many of the buildings that surround campus spaces are inappropriate in scale and do not contribute to the 'collegiate' environment. Deferred maintenance in many buildings significantly impacts the quality of life for students, faculty, and staff.

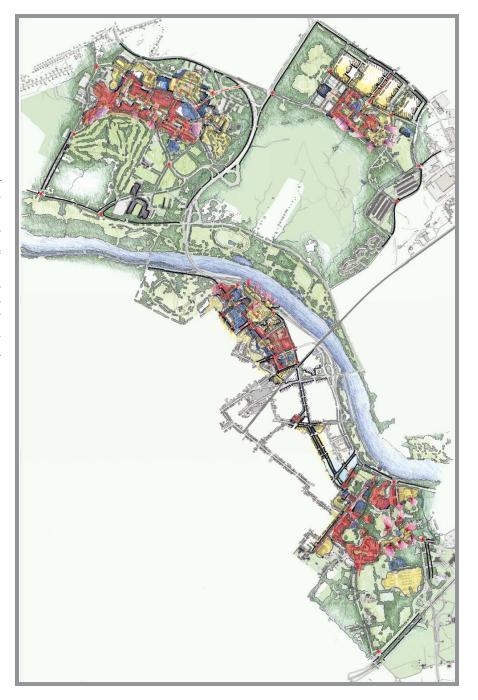
Of utmost importance to the Rutgers community and the future success of the University is its transportation infrastructure. Improvements to county and state roads over the last several decades have encouraged single occupancy car travel. Several times a day, traffic paralyzes area roadways causing problems for area residents and University operation. On-campus congestion limits pedestrian movement and threatens student safety. To accommodate individual users, a large percentage of university land is occupied by parking lots. Proposals for a fixed rail/dedicated lane transit system remain unrealized. Without alternatives to automobile transportation, University growth will continue to suffer from operation inefficiencies.

Planning Principles and Strategies









The Rutgers University Master Plan creates a framework of growth that enhances the quality of life and education on campus and in the surrounding communities. It aims to preserve the University's substantial physical and ecological resources and provide a model of regional development for the state and the nation. To achieve this goal the plan is guided by the following principles:

Academic Development

Strengthen academic clusters to build excellence in teaching, research, and service.

Rutgers Identity

Create a sense of arrival and campus identity with well-defined entries and borders.

University Heritage

Preserve and enhance the historic areas of the University.

Optimal Setting

Develop new buildings and outdoor spaces in a manner that encourages learning communities and sustainable development.

Facility Renewal

Rehabilitate and modernize existing facilities that support the University's academic mission.

Campus Connections

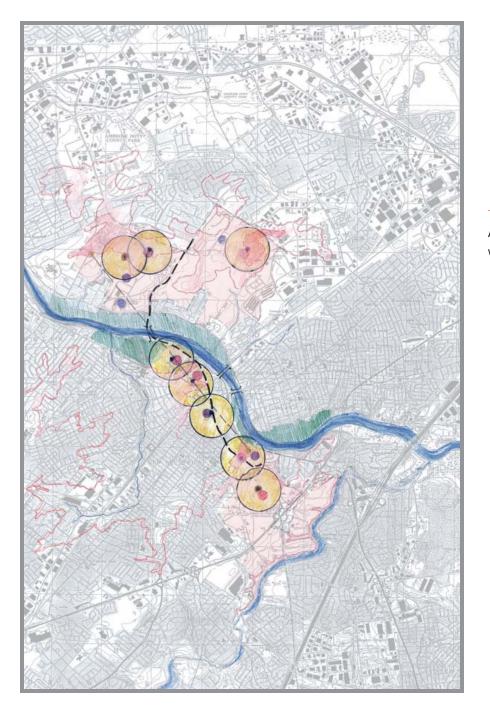
Facilitate efficient and rapid transportation between and within campuses.

Regional Development

Promote development by strategic partnerships with local communities.

Ecological Responsibility

Embody environmentally-friendly policies and practices in all facets of the university's operation in order to create a sustainable campus to serve future generations of students.



Campus Initiatives

As a means to ensure the execution of these principles, the following strategies were developed.

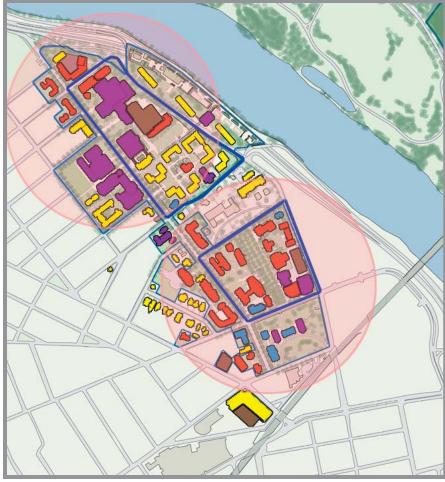


- Support Facility
 Athletic Facility
 Residential Building
 Academic Building
- Administrative Facility
- Student Life Recreation Building
- Five Minute Walk
- Zone of limited vehicular access

Academic Development

- Infill existing campus centers in order to strengthen academic clusters and improve connections to residential areas.
- Limit vehicular infringement in academic areas to create better pedestrian campuses.
- Concentrate academic growth to enhance foot traffic and casual community interaction.

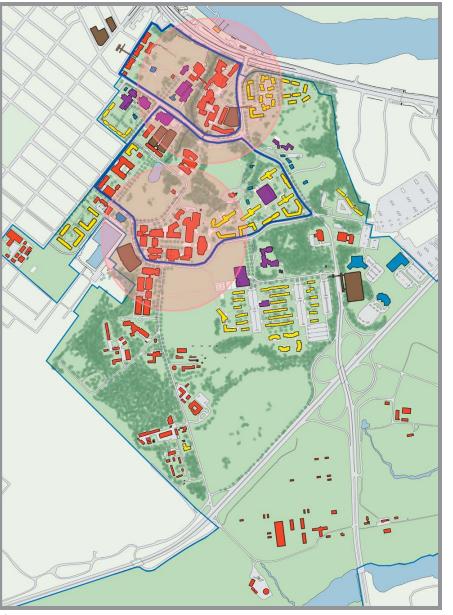




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Building use by program, pedestrian only zones and five minute walks

- 1 Busch Campus
- 2 Livingston Campus
- 3 College Avenue Campus
- 4 Cook/Douglass Campus







University Heritage

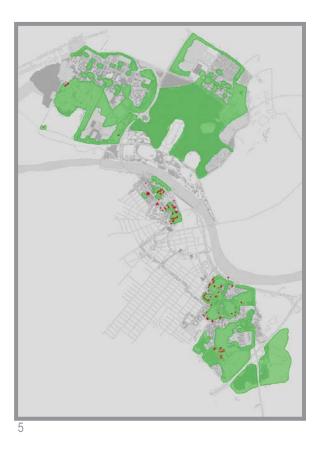
- Tie Rutgers to regional history: Revolutionary War, historic homesteads/estates, agriculture, industry, and infrastructure.
- Highlight historical development of the University through the preservation and enhancement of the university's historic campus open spaces.
- Restore and highlight historic estate houses and university buildings











1 Buildings that represent the historic origins of the University

- 2 Buildings that contribute to the character of the University's historic spaces
- 3 Campus spaces/districts that form the physical and developmental core of the University
- 4 Historic and sacred landscapes integral to the University's development
- 5 Existing and proposed campus open spaces important to the campuses beauty and coherence.

Optimal Setting Establish a set of building and landscape design guidelines that reflects the best of the University today in the projects and open spaces of the future. The guidelines

Buildings should:

- Be appropriate in scale
- Form exterior open spaces
- Create visual hierarchy
- Embody sustainable building practices

should incorporate and achieve the following goals:

Programs should be distributed in order to:

- · Create mixed-use academic and residential areas
- · Group similar disciplines to maximizes interdisciplinary interaction

Grounds should be designed and maintained to:

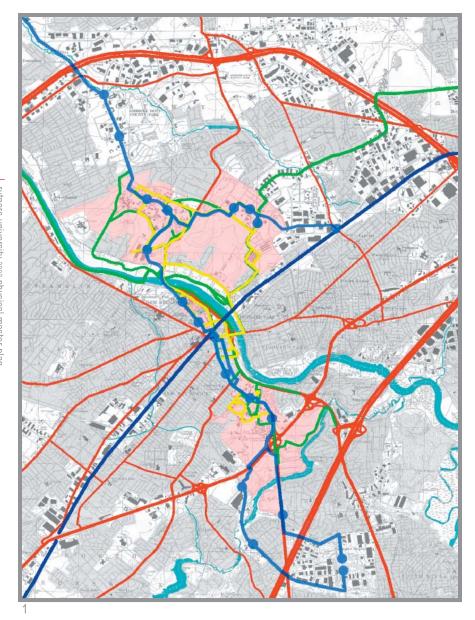
- · Define and reinforce University identity
- Create strong, simple landscapes that enhance the character of the campus and its buildings
- Accent building entries and focal points
- Restore and enhance existing ecological systems





- 1 Voorhees Mall: defining edges, principal axis, and architectural/landscape focal points
- 2 Voorhees Mall: building use by program
- 3 Voorhees Mall: primary landscape organization
- 4 278 University buildings and 2.4 M square feet are over 50 years old
- 5 465 University buildings and 8.6 M square feet are over 25 years old
- 6 Over 225 University buildings are houses, temporary modular units, or WWII era barracks warehouses.

- · Phase out inefficient and inappropriate buildings
- Develop systematic renovation plan
- Evaluate historic homes and designate appropriate low impact uses

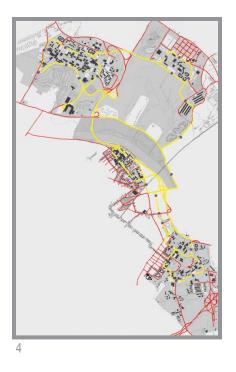


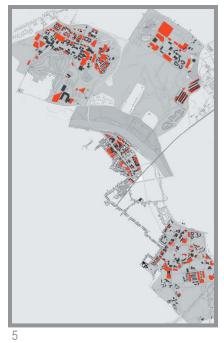


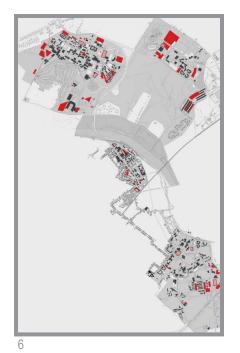


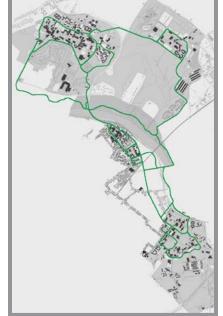
Campus Connections

- Create transit links to the New Brunswick, Edison, Dunellen, and Jersey Avenue train stations through the creation of ridership programs, university bus and car service, and other commuting incentives
- Promote future light-rail/dedicated lane system through ridership programs and University park-and-ride facilities
- Maximize bike use by linking with existing regional bike trails and the proposed East Coast Bikeway
- Improve efficiency of existing University bus system
- Continue and expand residential shuttle service









- 1 Regional transportation networks
- 2 Proposed Greater New Brunswick light-rail
- 3 Existing campus road network
- 4 Proposed campus road network
- 5 Existing campus parking
- 6 Proposed campus parking
- 7 Proposed campus bike network

- Road System
- Amtrak/NJ Transit Northeast Corridor
- Proposed Greater New Brunswick light rail
- University Bus Route
- University & Regional Dedicated Bikeways
- Campus Parking Lots
- Campus Parking and Structures

Infrastructure

· Create a light-rail/dedicated lane transportation system

7

- Increase student and employee housing
- · Improve local connections to regional transit
- Institute neighborhood shuttles
- · Improve bikeways and bicycle storage
- Offer ride-sharing incentives
- Establish remote park-and-rides

Policy

- · Restrict parking for first-years and sophomores
- Offer Incentives for using alternatives
- Class schedule modification
- Move non-campus programs off campus
- · Provide emergency rides home







Regional Development

The completed projects of University Center at Easton Avenue and Civic Square are significant to Rutgers' profile in downtown New Brunswick, the university's connection to the community and the city's revival. New partnership projects continue to build on these relationships:

- Rutgers Public Safety Building
- John J. Heldrich Center for Workforce Development
- New Street Student Housing
- New Brunswick Theological Seminary Housing and Parking Deck
- New Rutgers Bookstore
- Lower George Street Corridor
- College Town

Proposed Partnership Zones

- Proposed Partnership Projects
- Existing Partnership Projects

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rutgers university 2003 physical master plan

1 Partnership projects



Ecological Responsibility

- 1 Preserves 500 acres of existing old growth tree groves and ecological preserve and replaces 42 acres of parking with grass and trees
- 2 Builds 9,050 beds and 450 free market housing units on or with a 5 minute walk of campus academic cores
- 3 Concentrates 76% (5.4 million square feet) of new academic space within a 5 minute walk of transit stops.
- Adjacent off-campus housing
- On-campus housing
- Preserved treestands
- Parking to quadrangle conversions
- Light rail stop
- = = = Light rail
- Concentration of new academic facilities

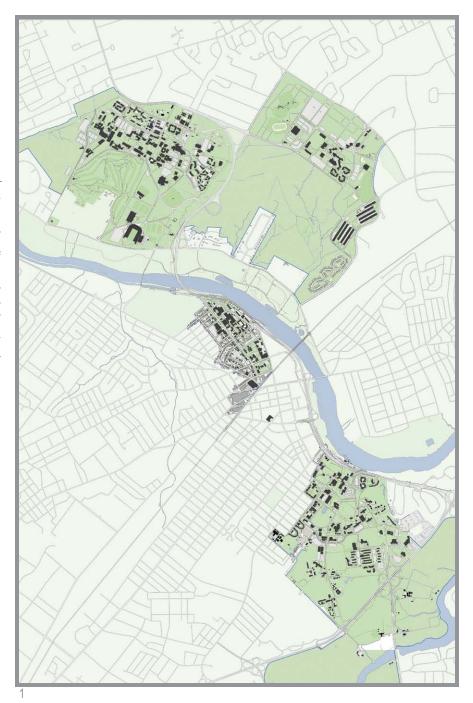
- Safeguard the Rutgers University Ecological Preserve and other old growth forested areas
- Support the construction of the Greater New Brunswick Light Rail, the expansion of university bike paths and the use of existing transit systems
- Encourage better commuting practices through the concentrated development of academic and housing facilities adjacent to transit stops
- Adopt LEED and U.S. Green Building Council standards in the construction of future building projects
- Create a comprehension storm water management strategy

Rutgers-New Brunswick/Piscataway Campus Plan







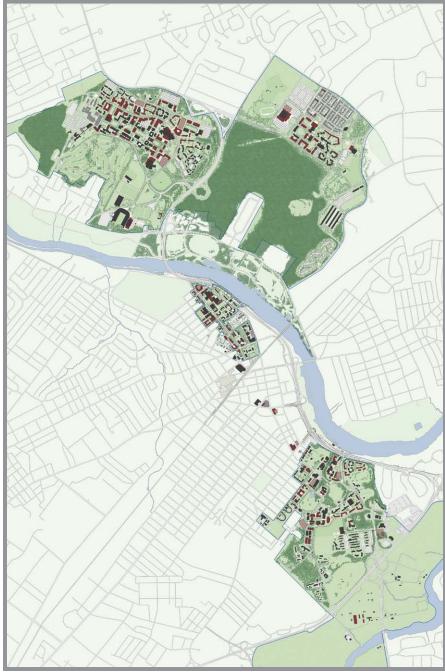


2003 New Brunswick/Piscataway Campus Plan

The 2003 New Brunswick/Piscataway Campus Plan strengthens the existing academic and residential clusters and improves the quality of the connections between them. The plan provides multiple opportunities for immediate expansion within a vision of sustainable long-term growth. Central to the overall campus plan is the implementation of a regional light-rail/dedicated lane transit system. The system would allow the university to shift financial and real estate resources from parking facilities to academic and residential expansion. New growth is concentrated in existing activity zones and targeted transit centers. Increased investment and cooperation with surrounding municipalities are aimed to concentrate the area's intellectual and cultural resources, coordinate regional infrastructure, and improve the quality of life for the University and its host communities.

Campuswide Issues

- Poor condition and quality of buildings and grounds
- Rundown, overcrowded facilities
- Uncoordinated facility expansion
- · Lack of a clear university identity
- Vehicular congestion and minimal connectivity
- Scattered athletic facilities
- Insufficient and uncoordinated recreation space
- Inadequate undergraduate housing
- · Limited faculty/staff/graduate housing
- · Limited access to off-campus retail/entertainment
- Limited integration with surrounding communities





Campuswide Proposals

- Create facilities to support the academic mission
- Repair, augment, or replace inadequate facilities
- Create new and improve existing campus open space
- · Limit vehicular access to the campus cores
- Integrate light-rail and other transit alternatives
- Relocate "non-campus specific" services from campus centers
- Expand athletics and recreation facilities
- Add and improve undergraduate housing
- Create new faculty/staff/graduate housing
- Improve connections to existing and future college towns
- Improve way-finding, signage, gateways, and approaches

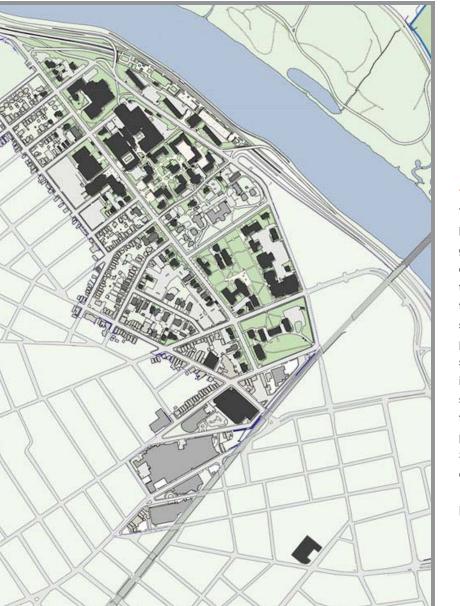
Existing Conditions: 9,700,000 GSF 13,500 Beds 20,000 Parking Spaces

Phase 1 (2007) adds: 1,100,000 GSF 1,000 Beds 1,100 Parking Spaces

Phase 2 (2012) adds: 1,500,000 GSF 1,000 Beds 500 Parking Spaces Remaining Capacity: 4,500,000 GSF 5,550 Beds 900 Parking Spaces

Master Plan Capacity: 16,800,000 GSF 21,050 Beds 22,500 Parking Spaces

Existing plan
 Proposed plan



College Avenue Campus

The College Avenue Campus and Voorhees Mall in particular are in many ways both the practical and symbolic center of the University. The campus has the greatest concentration of student traffic and is the University's gateway to the city of New Brunswick. Yet beyond the academic core, the quality of open space and the ease of circulation drop considerably. Building upon the recent improvement to the Bishop Quads, the plan replaces small parking lots with buildings and green space. Parking is shifted to more remote locations or into decks at the campus periphery. Poorly sited temporary buildings are removed and replaced with new structures and tree-lined quadrangles. Of central importance is College Avenue itself. New academic buildings occupy once empty lots and derelict building sites. Congestion is reduced through the relocation of parking and service facilities. Utility lines are replaced with new trees and streetscape elements. The potential development of student, faculty, and staff housing behind the Rutgers Student Center and College Avenue Gym further emphasizes the campus' walking environment and reduces local traffic.

Identified Issues

- College Avenue appearance and function (utilities, on-street parking, bus depot)
- · Parking and congestion (existing small lots with access from College Avenue)
- Landscape improvements
- · Limited land for future growth
- Presence of "non-campus specific" programs on already congested campus

Proposals

- Improvements to College Avenue including new buildings, street trees, site furnishings, and narrowing of road width.
- Remove inefficient small lots and add garage parking accessible from George Street.
- · Shift the majority of commuter parking to other strategic locations
- · Increase the physical beauty of the campus with better landscaping
- Site new buildings on infill sites
- · Relocate "non-campus specific" program to remote facilities
- Coordinate master plan with New Brunswick Theological Seminary plan
- Existing University Buildings
- Proposed University Buildings
- Proposed University Housing
- Proposed Parking Garages
- Partnership Projects
- Existing Non-University Buildings

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Existing Plan
 Proposed Plan



College Avenue Campus

Existing Conditions: 2,050,300 GSF 3,360 Beds 2,560 Parking Spaces

Phase 1 (2007) adds: 100,000 GSF (360) Parking Spaces

Phase 2 (2012) adds: 300,000 GSF 150 Beds (200) Parking Spaces

Remaining Capacity: 600,000 GSF 750 Beds

Master Plan Capacity (2027): 3,050,300 GSF 4,260 Beds 2,000 Parking Spaces

1 Aerial College Avenue

2 Rendering of Proposed College Avenue



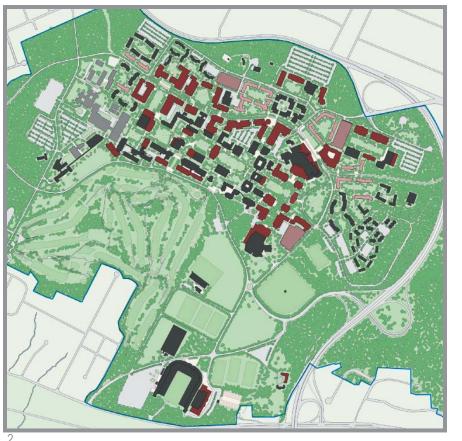
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Busch Campus

The large land area of the Busch Campus has allowed it to become the focus of Rutgers' public research, physical science, and engineering programs. Also home to the UMDNJ-Robert Wood Johnson Medical School, it is certain to be the focus of University expansion. The plan aims to provide space for this growth and shape it to the benefit of the campus' physical appearance. The introduction of large new academic and residential quadrangles and the restructuring of existing spaces create a collegiate image often missing on campus. Out-dated facilities have been replaced by new buildings. Campus density has been increased to improve interdisciplinary and community interaction. Parking and vehicular circulation has been pushed to perimeter for easy access. New landscape and buildings have been placed to beautify campus edges and entries.

Identified Issues

- Inadequate academic and research space
- Under-developed landscape and open spaces
- Confusing and redundant circulation system
- · Poor pedestrian connections between academic core and dormitories
- Sprawling academic campus
- · Large, intrusive areas of surface parking
- · Lack of university identity at campus edges and entry



Proposals

- · Replace surface lots with new buildings and open spaces
- Improve the landscape including appropriate scale and definition of space reinforced with the built edge and plant material
- Designate bus lane/light-rail corridor
- Improved connections between dormitories and the academic core
- Develop parking and transportation plans to serve both the Busch campus and commuters
- Improve gateways and approaches



- 1 Existing Plan
- 2 Proposed Plan



Busch Campus

Existing Conditions: 3,700,000 GSF 4,140 Beds 6,300 Parking Spaces

Phase 1 (2007) adds: 600,000 GSF 1,600 Parking Spaces

Phase 2 (2012) adds: 700,000 GSF 700 Parking Spaces

Remaining Capacity: 4,300,000 GSF 3,100 Beds

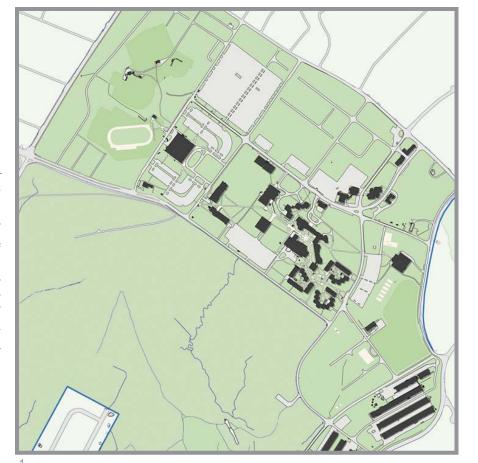
Master Plan Capacity (2027): 9,300,000 GSF 7,240 Beds 8,600 Parking Spaces

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1 Aerial of Busch Campus

2 Rendering of Proposed Busch Campus





Livingston Campus

Livingston campus's greatest challenge is its lack of density. The plan revives the original planned investment in the campus and augments it with new retail and residential opportunities in College Town. A expanded and renovated Livingston Student Center is the focus of both the campus and community development. From the main entrance, the campus is organized around the existing central axis and pedestrian walk from the library to the newly expanded Louis Brown Athletic Center. To either side of the walk, new academic buildings and quadrangles allow for significant programmatic expansion. New residential halls and renovation of the Quads increases on campus student housing opportunities.

Identified Issues

- · Lack of density
- Immature and undeveloped landscape
- · Lack of varied housing choices
- No clearly defined entrance to campus
- Need for expansion of student center and dining
- · Lack of off-campus destinations within walking distance
- · Visually disruptive areas of surface parking







1 Existing Plan

2 Proposed Plan

Proposals

- Additional academic programs
- Landscape improvements including extending the existing line of trees to the athletic center
- · Junior and senior apartment housing
- Enhance the entrances to the campus
- Improve student center and dining
- Create faculty/staff/graduate housing options in new college town
- · Add retail and entertainment activities in new college town

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Livingston Campus

Existing Conditions: 1,300,000 GSF 2,025 Beds 4,000 Parking Spaces

Phase 1 (2007) adds: 200,000 GSF 180 Beds (- 400) Parking Spaces

Phase 2 (2012) adds: 300,000 GSF 300 Beds

Remaining Capacity: 1,200,000 GSF 1,300 Beds 1,300 Parking Spaces

Master Plan Capacity (2027): 3,000,000 GSF 3,805 Beds 4,900 Parking Spaces

1 Aerial of Livingston Campus

2 Rendering of Proposed Livingston Campus



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Cook/Douglass Campus

Dispersed over a large and varied landscape and crossed with public and University roadways, the Cook/Douglass Campus lacks cohesion. The plan aims to reconnect the campus through the preservation of historical and natural landscapes and the addition of select infill buildings. Campus edges are clarified by reducing entry points and infilling potential building sites. The build out of Nichol Avenue and the creation of a new academic quad at the terminus of College Farm Road unite existing campus open spaces. Parking lots along George Street and Dudley Road have been consolidated to garages at the edge of campus and replaced by new residence halls for Cook and Douglass Colleges.

Identified Issues

- Confusing and redundant circulation system
- Unclear entries and edges
- Dispersed academic units
- Underappreciated open spaces and treatment of landscape campuswide
- · Weak connections with the downtown
- · Pedestrian connections disrupted by large areas of surface parking
- Nichol Avenue appearance and function (utilities, new buildings, edge and entry)

- Existing University Buildings
 Proposed University Buildings
 Proposed University Housing
 Proposed Parking Garages
 Partnership Projects
 Existing Non-University Buildings
- 1 Existing Plan
- 2 Proposed Plan

Proposals

- Reduce and clarify roadway infrastructure
- Introduce limited access gateways
- Consolidate academic programs through infill construction
- Create stronger connections to downtown by encouraging development on street and town edge
- Improve landscape preservation and maintenance
- Improve and increase parking opportunities through the implementation of College Farm Road and George Street garages.
- Improve Nichol Avenue streetscape including utilities, new buildings, edge and entry.



Cook/Douglass Campus

Existing Conditions: 2,600,000 GSF 4,120 Beds 4,700 Parking Spaces

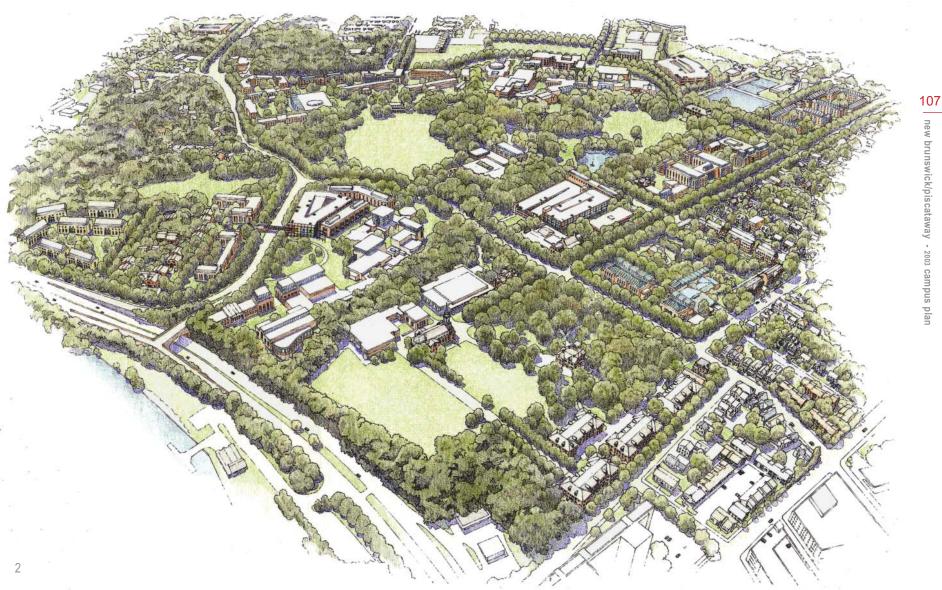
Phase 1 (2007) adds: 200,000 GSF 300 Parking Spaces

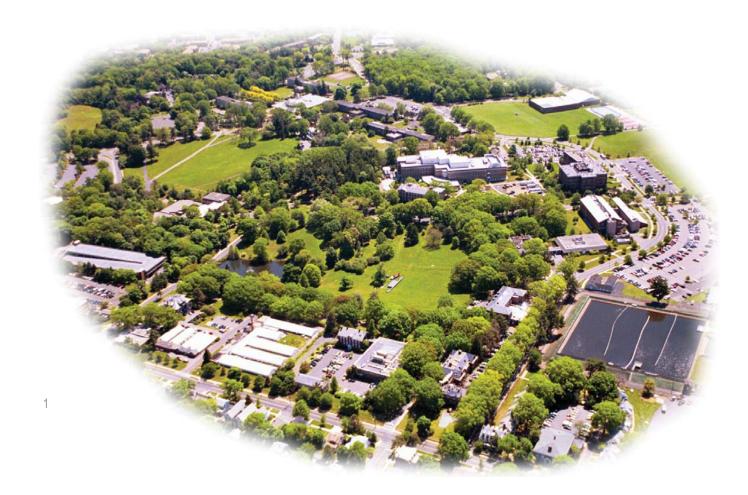
Phase 2 (2012) adds: 200,000 GSF 480 Beds

Remaining Capacity: 1,000,000 GSF 1,700 Beds 1,900 Parking Spaces

Master Plan Capacity: 4,000,000 GSF 6,300 Beds 6,900 Parking Spaces

Aerial of Douglass Campus
 Rendering of Proposed Douglass Campus





rutgers university 2003 physical master plan

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1 Aerial of Cook Campus

2 Rendering of Proposed Cook Campus



_____ new brunswick/piscataway - 2003 campus plan

Phase One

The first phase of the master plan incorporates existing design projects and funded growth. It also aims to address the most pressing of the university's deficiencies by the year 2007.

Academic and Research Facilities

- Center for Italian-American Studies (CAC)
- Center for Elementary Education (CAC)
- Animal Services Center (Busch)
- Bio-safety Level III Facility (C/D)
- Earth Ocean and Planetary Science Building (C/D)
- Institute for Health/State Health Policy Center (CAC)
- Equine Science Center (C/D)
- Bartlett Hall Addition (C/D)
- Center for Environmental Health and Occupational Safety (Busch)
- School of Nursing (CAC)
- Center for Biomedical Engineering (Busch)
- Center for Genetics Engineering (Busch)
- 2 Flexible Research Laboratories (Busch)
- General Classroom Building (Livingston)
- MGSA Music Expansion (C/D)
- Institute for the Environment (C/D)

Housing and Student Life

- Livingston Student Center Expansion (Livingston)
- Livingston Quads Renovation (Livingston)
- Corwin Residence Hall Replacement/Douglass Residence Hall (C/D)
- New Street Apartments (NB)*

Athletics and Recreation

- Hale Center Addition (Busch)
- Rutgers Boathouse (CAC)

Support Facilities

- Mabel Douglass Library Expansion (C/D)
- Busch Campus Transit Center (Busch)
- Cooper Dining Hall Addition (C/D)

Public/Private Partnerships

- Public Safety Building (NB)
- Commercial Avenue Garage (NB-C/D)
- College Town Retail I (Piscataway)

Phase Two

Planned for the next 10 years, the second phase of the plan focuses on the impact of potential enrollment growth. Its goal is to set the pattern for long-term development through the introduction of critical open space and infrastructure.

Academic and Research Facilities

- University College Classroom Building (CAC)
- Psychology Addition (Busch)
- 2 New Departmental Office/Classroom Buildings (CAC)
- Engineering Resource Center (Busch)
- Mechanical Engineering (Busch)
- Electrical Engineering (Busch)
- 2 Flexible Research Laboratories (Busch)
- Nelson Biology Addition (Busch)
- Tillett Hall Classroom Renovation (Livingston)
- Center for Gene Discovery (Busch)
- Cook Research Greenhouse (C/D)
- Zimmerli Expansion (CAC)
- Research Laboratories (C/D)
- Institute for Women's Leadership (C/D)
- Graduate School of Social Work Addition (CAC)

Housing and Student Life

- Raritan Residential Tower (CAC)
- Rutgers Student Center Addition (CAC)
- Busch Campus Center Expansion (Busch)
- Graduate Student Apartments (Busch)
- College Town Residential I (Piscataway-Livingston)*
- Douglass Residence Hall I (C/D)
- Old Gibbons Residence Hall Replacement (C/D)
- Douglass Center and Classroom Building (C/D)
- Cook College Center Addition (C/D)

Athletics and Recreation

- Louis Brown Athletic Center Expansion (Livingston)
- Livingston College Administration Building (Livingston)

Support Facilities

- Library Annex Addition (Busch)
- Administrative Services (Busch)
- Cook/Douglass Transit Center (C/D)
- Pesticide Storage and Maintenance Facility (Busch)
- Facilities Central Administration Building (Busch)

Public/Private Partnerships

• College Town Retail II (Piscataway)

*Also a public/private partnership

rutgers university 2003 physical master plan

	2002	Facilities	2012	Master Plan
		Needs 2002		Capacity
Student	35,000	35,000	41,000	>60,000
Population	33,000	33,000	41,000	200,000
Building Area	9.7 M	10.0 M ²	12.3 M	14.0.44
G.S.F. ¹	9.7 M	10.0 M	12.3 M	16.8 M
University	13,500	14,640	15,500	21,050
Beds (G.S.F)	(2.8 M)	(3.6 M)	(3.4 M)	(5.2 M)
Parking	20,000	19,000	21,600	22,500
Spaces				

1 Does not include housing

2 Based on normative peers

Long-Term Growth

In total, the plan indicates a future growth potential of almost 10.5 million square feet. With a total of 23 million square feet, the university could accommodate over 50,000 students, house a greater percentage of its student, faculty, and staff, and increase its student-area ratio. Long-term projects account for over 6.3 million square feet of the new campus growth.

The full master plan of the New Brunswick/Piscataway Campus achieves a density slightly greater than that of the existing College Avenue Campus while at the same time maintaining the open spaces that give each campus their unique character. In many ways, it is an exercise in building infill. With few exceptions, new building sites are within the currently developed boundaries of the campus. The deliberate preservation of the University's land resources enables Rutgers to continue to grow well beyond the outline of the plan. It is in the University's best interest to leverage this asset to the benefit of future generations. In its careful balance of building and open space the plan creates a flexible outline that will result in an environment equally suitable to the aspirations of University.

Acknowledgements

The Campus Planning team would like to acknowledge the following individuals and groups for their contributions to the 2003 Rutgers University Physical Master Plan:

Student Forums, President's Cabinet, Dean's Council, Faculty Council, College Deans, Committee on Standards and Priorities in Academic Development (CSPAD), Administrative Council, Office of Research and Sponsored Programs, College Recreation Directors, University Housing Office, Parking and Transportation, Public Safety, Intercollegiate Athletics, Rutgers Environmental Health and Safety, Rutgers University Libraries, Rutgers University Computing Services, Host Communities and Neighboring Institutions

Richard L. McCormick Francis L. Lawrence Karen Kavanagh Joanne Jackson	University President Former University President Executive Vice President for Administrative Affairs Senior Vice President & Treasurer
Rutgers-Camden	
Roger Dennis	Provost
Mark Rozewski	Associate Provost
Rutgers-Newark	
Steven Diner	Provost
Norman Samuels	Former Provost
Gene Vincenti	Associate Provost
Christopher Pye	Assistant Planner

Joseph Seneca	Former Vice President for Academic Affairs
John Salapatas	Former Executive Assistant for Academic Affa
Michael Imperial	Director of Housing
Robert Spear	Director of Parking and Transportation Servic
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