



REPORT

UNC at CHAPEL HILL

Department of Public Safety Transportation
and Parking Five Year Plan 2011-2016



Submitted to:



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

Submitted by:



Kimley-Horn and Associates, Inc.

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1. Acknowledgements

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Representatives from each of the following:

Faculty Council
 Employee Forum
 Student Body
 Graduate and Professional Students
 Athletics
 UNC Hospitals
 Academic Affairs Units
 Health Affairs Units
 Student Affairs
 Chapel Hill Transit
 Triangle Transit



2. Executive Summary

The University of North Carolina, Department of Public Safety has completed a five-year plan that provides a financial analysis of the Transportation and Parking System for the University. The study analyzed the projected expenditures and revenue requirements for the University's Transportation and Parking System through the academic year 2015/16.

The study began by identifying the University's guiding principles for the Transportation and Parking System. Based on a comprehensive review of the System, it is projected that a revenue shortfall of approximately \$6.5 million will be realized by 2015/16. In order to meet the identified financial obligations, an evaluation of the current operations was conducted to institute additional efficiencies within the System and additional sources of revenue considered to close the financial gap.

Guiding Principles were identified early in the Plan development to provide a framework for the Transportation and Parking System, ensuring that decisions are consistent with the overall goals of the University.

In addition to the Guiding Principles, the following findings were identified during the course of this study.

- Chapel Hill Transit's projected cost increases to sustain the current levels of local fare-free transit service represent a \$2.6 million annual increase by 2015/16.
- Triangle Transit's projected cost increases to sustain the current levels of regional fare-free transit services represent a \$270,000 annual increase by 2015/16.
- Based on the University of North Carolina at Chapel Hill Development Plan and subsequent updates, the current parking on-campus is at a deficit.
- Park-and-ride lots are well-utilized, especially in the 15/501 corridor.
- UNC Healthcare System has plans for new building development over the next years, adding 700 employees to the campus beginning in 2015 and another 700 employees in 2019.



- Patient/visitor parking on-campus is at a deficit that will continue to grow with the Healthcare System's development program.
- Based on the University of North Carolina at Chapel Hill Development Plan and subsequent updates, the following parking decks are identified as capital construction projects creating an annual debt obligation of \$2.8 million by 2015/16. The following decks are to be constructed on campus by 2015/16:
 - Craige Expansion – 990 Employee Spaces
 - Gravelly - Hospital Area Facility (location to be determined in conjunction and agreement with the Hospital) – 430 Patient / Visitor Spaces
- A standard Inflationary increase of 3% over existing operating expenses represents \$768,000 in additional costs by 2015/16.
- Total 2015/16 expenses are projected to exceed revenues by \$6.5 million.

In order to meet the financial obligations of the System while adhering to the guiding principles for developing a 5-Year Plan, the following recommendations are identified:

- Efficiencies (\$609,000 annual revenue by year 2015/16)
 - Remote cashiering (pay lots); implementation of meter pay stations
 - LED lighting (parking structures)
 - Meter pay stations (on-street spaces)
 - License plate recognition system (LPR) – Dogwood and ACC
 - Electronic, online method for temporary use permits
- Funding Strategies (\$5.7M annual revenue by year 2015/16)
 - Belltower visitor lot
 - Department and Student Transportation fees
 - Daytime permit rates
 - Park-and-ride permit
 - Night parking program
 - South Campus daily maximum

The following charts summarize the funding strategies and timeline for implementation, as well as 2015/16 revenue projections for each of these funding strategies.



Table 2.1 – Funding Strategy Implementation Timeline

2011/12	2012/13	2013/14	2014/15	2015/16
Convert Belltower Lot to visitor parking		Increase daytime permit rates	Introduce night parking program	Increase South Campus daily maximum
Increase transportation fees		Introduce park-and-ride permit		

Table 2.2 – Funding Strategy 2015/16 Revenue Projection

Funding Strategy	2015/16 Revenue
Convert Belltower Lot to visitor parking	\$ 38,000
Departmental transportation fee increase	\$ 1,396,000
Student transportation fee increase	\$ 1,980,000
Increase daytime permit rates	\$ 696,000
Introduce park-and-ride permit	\$ 604,000
Introduce night parking program	\$ 743,000
Increase South Campus daily maximum	\$ 214,000
Total Projected 2015/16 Revenue	\$ 5,671,000



3. Introduction

The University of North Carolina at Chapel Hill Department of Public Safety conducted a Transportation and Parking System Assessment and Access Plan in 2003. This plan developed for the first time, a Five-Year Plan for the Transportation and Parking System that outlined funding strategies to support capital building projects (new decks, park and ride lots, etc.), Fare-free local and Regional Transit Services, increased park and ride use, and general changes in funding strategies as the Parking System eliminated large amounts of surface parking spaces and replaced it with parking structures. The University of North Carolina at Chapel Hill Development Plan and subsequent updates identified the approved strategies for managing traffic and parking based on planned University and Hospital growth. The recommended funding strategies and programmatic changes to support the growth were incorporated into the Transportation and Parking System over the last several years.

In 2010, the University initiated steps to look beyond the previous Five-Year Plan, and to again assess the Transportation and Parking System needs for the University and Healthcare System through the 2015/16 academic year.

The Transportation and Parking System at UNC is solely receipt-supported, with revenue generated from three major sources: student and departmental transportation fees, daytime parking permit revenues, and visitor parking revenues. The UNC Parking System receives no State funds.

This report documents the results of planning efforts that focused on transportation and parking requirements at the UNC campus for the next five years. In particular, overall parking requirements and operational efficiencies were analyzed as they relate to upcoming planned developments by UNC, UNC Healthcare, Chapel Hill Transit (CHT), and Triangle Transit (TT). The University of North Carolina at Chapel Hill Development Plan and subsequent updates outlines transportation and parking demand based on planned development on and around main campus. The purpose of this study is to assess the upcoming development and programmatic needs, identify areas of concern, recommend actions related to the overall parking program to meet campus needs, and develop revenues to support the projected financial obligations.

Currently, UNC-CH boasts approximately 29,400 total students (resident and commuter), approximately 12,000 UNC faculty and staff, and 7,300 UNC Hospitals' employees. This 48,700-person strong population places a high demand on the community for access to



the main campus. Due to the limited number of parking spaces on the main campus, many students and staff use alternative modes of transportation to access campus including local and Regional Transit Services to access the campus. The local and Regional Transit Systems supplement the on-campus parking supply by providing transit from home and from park-and-ride locations at the perimeter of the local service area, as well as in remote areas of the county and surrounding communities. Current transit ridership serving the campus (Chapel Hill Transit and Triangle Transit) totals approximately 7 million boardings per year.

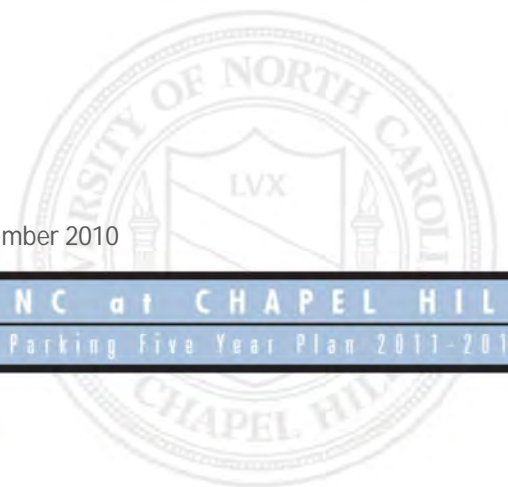
The University of North Carolina at Chapel Hill Development Plan and subsequent updates states:

“The ‘shortfall’ (i.e. the difference between the amount of parking that would be required if parking continued to be provided at existing rates, and the amount that will actually be provided)...in commuter parking will be met by alternative modes, and the Development Plan includes a range of transportation initiatives to accommodate this. The shortfall in resident student parking will be met in storage lots off-campus. The needs of visitors will continue to be satisfied on-campus.”¹

As part of this current parking planning study, Kimley-Horn and Associates, Inc. (KHA) met with representatives from Public Safety, Facilities Planning, UNC Healthcare, Chapel Hill Transit, and Triangle Transit to get an understanding of current population growth projections as well as current capital construction projects that are planned for the campus in the next 5 years. In addition, the University of North Carolina at Chapel Hill Development Plan and subsequent updates Traffic Impact Analysis and 5-year projections for the existing Transit Systems also were reviewed. These plans are briefly described in subsequent sections of this report, as well as their resulting, anticipated impacts to transportation and parking requirements.

The University executed an agreement with the Town of Chapel Hill in June 2009 that defines the responsibilities of the Town and University in the development of Carolina North. However, no funding sources have been identified to begin development. There are no effects of the Carolina North development projected at the time of this report to impact the Transportation and Parking System through 2015/16.

¹ UNC-Chapel Hill Annual Development Plan Report of Transportation, December 2010



This study is composed of several sections. To begin, guiding principles that were developed and referred to throughout the study are documented in Section IV. Section V outlines the process and steps that were taken to solicit input from various interest groups. Subsequently, the projected standard inflationary increases, capital construction, and transit contractual obligations impacting the Transportation and Parking System are outlined in Section VI, followed by a description of current and proposed future distribution of System costs to users in Section VII. In conclusion, several options to meet future financial and operational obligations are evaluated and discussed, ultimately leading to final recommendations and a schedule of implementation.



4. Guiding Principles

To understand the ultimate goals of the University and its overall Transportation and Parking System objectives, it was important to identify the Guiding Principles for the System. These principles provide a framework for the Transportation and Parking System, ensuring that decisions are consistent with the overall goals of the University; the Transportation and Parking System; and all of the System's users. As recommendations were researched, developed, and refined, the Guiding Principles also were used as an evaluation tool for the team. Each idea to improve efficiencies or financial performance within the transportation and parking program was evaluated with respect to the Guiding Principles to determine if it should be considered further for implementation. Recommendations presented in this report fall within the Guiding Principles framework. The study's Guiding Principles appear below.

- Guiding Principle #1: *Transportation and parking operations to remain solely self-funded and receipt supported.*
- Guiding Principle #2: *Develop a more equitable balance of the cost of the Transportation and Parking System to all users of the System.*
- Guiding Principle #3: *Reduce the current parking subsidy for transit services and specifically reduce it from \$1.5 million to \$1.0 million over the 5-year study period.*
- Guiding Principle #4: *Maintain adequate on-campus parking for visitors and patients.*
- Guiding Principle #5: *Encourage sustainable multimodal transportation options for users within the System.*
- Guiding Principle #6: *Maintain commitment to partnership with the*



Towns of Chapel Hill and Carrboro in the operation of the Chapel Hill Transit fare-free system.

Guiding Principle #7:

Maintain commitment to promote use of Triangle Transit options for access to the main campus.

5. Study Process



The purpose of this study is to develop a 5-year funding strategy for the University's Transportation and Parking System. Research and analysis included confirmation of the proposed capital building projects as well as parking policies and revenue streams that support the projected financial obligations. Kimley-Horn was engaged to provide consulting services to aid in the plan's development. This section outlines the process taken to complete this study. Further detail is provided in subsequent sections of this report.

Review of Management Strategies and Potential Recommendations. To begin, a cursory review of current management strategies and financial data was performed to develop a baseline upon which recommendations and improvements could be made. Upon initial review of the current state of the System, a preliminary list of potential operational, technological, and efficiency-related recommendations were developed and presented to the Advisory Committee on Transportation (ACT). Throughout this study, ACT assisted in the development and refining of various recommendations. Comments from ACT were gathered from throughout the process and the initial recommendations revised and updated accordingly.

Interest Group Meetings, Information Gathering, and Financial Projections. Following the initial ACT presentation, additional meetings were held with other stakeholder groups, including Local and Regional Transit (CHT and TT), UNC Hospitals, the Medical School, and Facilities Planning. The intent of these meetings was to gather information regarding the effect of current transportation and parking policies on each group, but, more importantly, to obtain an understanding of planned development or change in operations from each within the 5-year study period. Information collected included items such as plans for new parking decks, a new 300-bed tower for the hospital, a new medical research building for the medical school, and projected expense increases for both CHT and TT. This information was used to project annual financial obligations through the 5-year study period and to gauge the impact of each recommendation to the bottom line.

Recommendations Review and Refinement. Recommendations were refined and were compared to peer institutions. These revised recommendations were then presented to ACT once more. The feedback from ACT was used to further refine the list of recommendations. At this point, the list of compiled recommendations was reviewed with the Chancellor, Vice Chancellors, and Associate Vice Chancellor for Campus Services.



Final ACT Presentation and Public Outreach. A final presentation outlining the revised recommendations and implementation strategies was then made to ACT, and approved. Upon ACT approval, the finalized recommendations were presented in a series of public forums, including specific forums for faculty, staff, students, and the general public. These forums were conducted as an outreach measure to spread awareness of future changes in operation as well as a means of gathering additional input for future consideration.

Final Modifications to Plan. Following public outreach and ACT approval, the final modifications were made to the plan, which modified the recommendations based on the feedback acquired. In addition, ordinance modifications were developed, based on the refined recommendations, for presentation to the Board of Trustees.

Board Approval and Report Development. Following the forums, the recommendations and ordinance changes were prepared for the Board of Trustee presentation and approval. Following approval from the Board of Trustees, this report was developed to document the final recommendations and operational improvement strategies, including implementation timelines through the 2015/16 academic year.



6. Five-Year Projected Obligations

The financial obligations of the Transportation and Parking System for the next five years may be classified into three major categories: expenses associated with the operations of the Parking System (e.g., routine maintenance, administrative operations, ongoing operational expenses), expenditures to support the University's participation in funding fare-free Transit Systems that serve the campus (Chapel Hill Transit and Triangle Transit), and debt payments to service capital expenditures for existing and future parking structures. This section summarizes the budgeted revenue and expense data for 2010/11, reviews the projected increases in the expenditures associated with projected transit obligations, and reviews the additional capital expenditures necessary to provide additional parking supply identified in the University of North Carolina at Chapel Hill Development Plan and subsequent updates during the 5-year study period.

6.1 Fiscal Year 2011 Budgeted Revenue versus Expense

The Department of Public Safety is responsible for maintaining and operating the parking facilities on and around main campus, as well as enforcement and administration of the Transportation and Parking System. Tables 6.1.1 and 6.1.2 summarize budgeted revenue and expense data for the 2011 fiscal year.

Table 6.1.1 – Fiscal Year 2011 Budgeted Revenue²

Parking Permits	\$ 11,276,942
Patient/Visitor Parking	\$ 5,009,532
Departmental Transit Fee	\$ 3,161,173
Student Transit Fee	\$ 2,057,651
Debt Supplement	\$ 539,315
Citations (net)	\$ 160,000
Investment Income	\$ 160,000
All Other Revenue	\$ 135,000
Total Revenue	\$ 22,499,613

Table 6.1.2 – Fiscal Year 2011 Budgeted Expense

²Department of Public Safety 2010/11 Operating Budget

Salaries/Wages	\$ 3,566,144
Benefits	\$ 1,059,747
Supplies	\$ 606,179
Utilities	\$ 667,735
Repair/Maintenance	\$ 1,273,050
Security	\$ 1,379,296
All Other Operating Costs	\$ 1,426,077
Transit (Chapel Hill Transit & TT)	\$ 6,317,168
Debt Expense	\$ 5,090,915
UNC Admin Charges	\$ 514,991
Transfer to Point to Point Shuttle	\$ 250,000
Capital Repair	\$ 500,000
Total Expense	\$ 22,651,302

As shown, the highest expense categories are payments for transit, debt expense, and salaries/wages/benefits. These three categories make up approximately two-thirds of the total expense budget.

The most significant sources of revenue are parking permits, visitor parking fees, and transportation fees paid by students and University departments. These sources represent approximately 95% of revenue.

The transportation fees received from students and University departments totaled approximately \$5.1 million dollars, while the expenses for all transit costs (CHT, TT, Point to Point) totaled approximately \$6.6 million. In addition, there are costs to maintain the park and ride lots carried in various other expense categories. Therefore, the transportation fees collected do not fund the total cost of the System and revenues from the Parking System (permits and visitor payments) are subsidizing the cost of transit. During the 2010/11 academic year, this subsidy is projected to be \$1,500,000 for transit costs.

6.2 Capital Construction Projects



This section reviews the impacts of proposed capital projects on the parking supply. The University of North Carolina at Chapel Hill Development Plan and subsequent updates was used as a basis for understanding the proposed projects within the five-year planning window. In addition, meetings were held with Facilities Planning and UNC Healthcare Planners to obtain an understanding of their proposed projects during this time period and to understand the impacts of those projects on the Transportation and Parking Systems.

6.2.1 The University of North Carolina at Chapel Hill Development Plan and Subsequent Updates

The University of North Carolina at Chapel Hill Development Plan and subsequent updates for the main campus was adopted in 2003. Modifications have been adopted since the original approval of the Plan, with “Mod 3” being the most recent. The University issues an Annual Development Plan Report on Transportation with the most recent update being issued in December 2010. The December 2010 update states the following regarding impacts of the University of North Carolina at Chapel Hill Development Plan and subsequent updates on Parking:

“The Development Plan involves extensive changes to the parking supply. Around 4,061 existing spaces will be permanently closed, and around 5,640 new spaces will be provided, mostly in new structures.”

“The net effect is an approved increase of 1,570 spaces on campus when all projects are complete.”

“Visitor parking accounts for most of the net increase, reflecting the importance of accommodating visitors (particularly the growing number of hospital patients). However, there is expected to be a net increase of about 380 commuter spaces and a decrease of about 287 resident student spaces.”³

Parking Decks

³ The University of North Carolina at Chapel Hill Annual Development Plan Report on Transportation, December 2010, page 3.

The University of North Carolina at Chapel Hill Development Plan and subsequent updates includes several new parking facilities needed to replace surface parking lost to building footprints and meet some of the increase in parking demand, to minimize the parking deficit that exists on the campus. Table 6.2.1 identifies the proposed new parking decks as they are documented in the University of North Carolina at Chapel Hill Development Plan and subsequent updates, the number of additional net parking spaces, and the proposed construction schedule.

Table 6.2.1 – New Parking Decks in Development Plan⁴

Facility	Net Parking Spaces	Anticipated Construction Start Date	Anticipated Construction Completion
ACC	198	Jan. 2013	Jan. 2015
Cameron (Arts Common)	116	Jan. 2013	Jan. 2015
Craige Expansion	990	Jan. 2013	Jan. 2015
NC H&C (Gravelly)	595	Jan. 2013	Jan. 2015
Tennis Court	231	Jan. 2013	Jan. 2015
Total	2,035		

Preliminary opinions of probable cost were prepared for the construction of the Gravelly parking deck and the Craige deck expansion projects. The estimated debt service for these two decks is approximately \$2.8 million in 2015/16.

6.2.2 UNC Facilities Planning

The project team met with Facilities Planning to discuss projects requesting funding in the UNC six year Capital Plan. The earliest funding for a new capital project may be available in 2012, with a possible project completion by 2015. If funding were to be received, the projects shown in Table 6.2.2 could impact parking supply and demand in the last year of this five year study. Table 6.2.2 also shows whether a permanent parking loss is projected to occur (PL); a loss during construction is projected to occur (CL); and/or whether additional parking will be added (AP).

Table 6.2.2 – Six Year Capital Projects

⁴ The University of North Carolina at Chapel Hill Annual Development Plan Report on Transportation, December 2010, Tables 1.1 and 1.2.

Priority	User Group	Building Name	Project Title/Brief Description	Gross SQFT	Parking Impact ⁵
1	Academic	Law School at Carolina North	New building for Law School to support enrollment growth. Included is required site infrastructure, landfill remediation, and demolition of existing buildings to support Law School.	287,000	AP
2	AA Provost	Morehead Planetarium	Bldg. 152-Morehead Planetarium - comprehensive renovation and addition for Science Center.	62,000	CL
3	Academic	Academic Buildings Phase I	Comprehensive renovation of academic buildings to address life safety and deferred maintenance - Alumni Bldg., Bingham Hall, Caldwell Hall, Carr Bldg., Carrington Hall, Gardner Hall, Hamilton Hall, Howell Hall, Manning Hall, Mary Ellen Jones Bldg., Playmakers Theatre, and Wilson Library	864,450	CL
4	Arts & Sciences	Science Complex Phase III	New building for Psychology Department and Interdisciplinary Sciences to house teaching, classrooms, offices, and research space to accommodate enrollment growth. Also included are consolidated Science Libraries and replacement for ROTC building.	281,000	PL
5	AA Provost	Research Building at Carolina North	New building at Carolina North for the Institute for the Environment, including Biostatistics, Epidemiology, Frank Porter Graham Child Development Institute, Highway Safety Research Center, Injury Prevention Research Center, Institute on Aging, NC Institute for Public Health, and Sheps Center for Health Services Research.	150,000	AP
6	School of Information & Library Sciences/ Kenan Flagler Business School	School of Information & Library Sciences/ Kenan Flagler Business School	SILS - New building to accommodate changes in the programmatic requirements and enrollment growth for SILS and Business School.	200,000	--
7	School of Medicine	Medical Education Building (Berryhill Replacement)	Replacement facility to expand teaching and office space to accommodate enrollment growth.	333,200	CL

⁵ PL = Permanent Parking Loss, CL = Parking Loss During Construction Only, AP = Parking to be Added

8	Arts & Sciences	Social Science Complex	Carolina Social Sciences Complex, renovation and replacement of Van Hecke-Wettach to accommodate enrollment growth.	225,000	CL
9	Academic	Academic Buildings Phase II	Comprehensive renovation of academic buildings to address life safety and deferred maintenance - Battle Hall, Beard Hall, Coates Bldg., Davis Library, Jackson Hall, MacNider Hall, Pettigrew Hall, Phillips Annex, Phillips Hall, Smith Bldg., South Bldg., Taylor Hall, Vance Hall, and Wilson Hall	1,051,058	CL
12	Arts & Sciences	Global Language & Literature Building	New building to accommodate changes in programmatic and enrollment growth for global languages departments (Advance Planning).	68,708	
13	AA Provost	Ackland Art Museum	Bldg. 003-Ackland Art Museum - Replacement of Ackland Art Museum to allow for expansion of College of Arts & Sciences (Advance Planning).	100,000	
14	AA Provost	Botanical Garden	Botanical Garden - New biology research facility to allow for expansion of College of Arts & Sciences.	40,227	

The above projects range from interior building renovations to new construction projects on main campus and Carolina North. Only projects that impact parking operations were taken into account when making recommendations on future operations. Table 6.2.3 summarizes those projects, in order of priority; however, there currently is no funding in place for these projects. Therefore, it is assumed for the purposes of this study that none of the projects would begin construction during the 5-year plan period. Should a project receive funding, the one that would most affect on-campus parking would be the Science Complex Phase III building.

Table 6.2.3 – University Capital Plan

Medical Education Building (Berryhill Replacement)	Replacement facility that would result in a <u>loss of service parking</u>
Social Science Complex	Renovation and replacement project that would result in a <u>staged temporary loss of parking</u>



6.2.3 UNC Hospitals and School of Medicine Development

UNC Hospitals the University's School of Medicine anticipate two new proposed projects to be developed in the 5-year period (and just beyond) that will significantly impact parking supply and demand on campus.

UNC Hospitals has identified an existing demand for additional beds now; however, plans for a new bed tower are just beyond the 5-year outlook. UNC Hospitals plans to develop a 5-story, 300-bed tower in the location previously designated for a heart hospital. The new bed tower will generate additional employees, patients, and visitors. Concerns were expressed that this additional demand will add to an already overloaded parking supply.

Between now and the construction of the proposed bed tower, UNC Hospitals plans to reconfigure internal operations such that 35 new beds will be added to their existing inventory. This modification represents the last remaining available reconfiguration within the existing walls of the existing hospital facilities to add capacity without adding additional square footage. While adding 35 new beds is not as significant as the proposed 300 bed tower, it will add more demand to the existing on-campus parking through increased patients, visitors, and employees.

A proposed new building planned for the Medical School poses the biggest challenge to existing on-campus parking. In 2013, a new 360,000-square-foot building will be opened that will ultimately employ approximately 700 new staff members. It is anticipated that the staffing for the building will be phased over a period of months, so that the full 700 staff is not added to the campus infrastructure all at one time. It should be assumed that visitors to this new facility will total 10%-15% of the new employees (70-105 visitors). Currently, this project does not have any parking included in its plans; rather, the additional employees and visitors will be added to the overall parking demand in the health affairs region of the campus.

A second medical research building is planned for the Medical School with construction beginning near the end of this study's 5-year outlook. It is anticipated that this second building also would bring approximately 700 new employees and corresponding visitors. The building is anticipated to open in 2019.



6.2.4 Capital Construction Projects Summary

Within the next five years, design and construction of four additional parking structures are shown in the University of North Carolina at Chapel Hill Development Plan and subsequent updates. It is unlikely that funding can be obtained to construct all of these facilities within this time period. It is recommended that design and construction commence—at a minimum—in accordance with the University of North Carolina at Chapel Hill Development Plan and subsequent updates schedule (design initiation in January 2013, construction complete in January 2015) for the expansion of the Craige Deck and construction of the new Gravelly Deck, if not sooner.

6.3 Parking Permits

6.3.1 Background

Parking permits that provide the ability to park on or near campus are issued to various user groups (faculty, staff, commuting students, and on-campus residential students).

On-campus parking is limited to the requirements noted in the University of North Carolina at Chapel Hill Development Plan and subsequent updates. Departments receive an allocation of parking permits to distribute based on a criteria established by the Dean / Director / Chair. Based on recommendations implemented from the 5-Year Plan in 2004, the University instituted a sliding scale fee structure for permits in which faculty and staff permit holders are charged fees in accordance with their salaries. The following salary ranges were established for parking permit fees:

- < \$25,000
- \$25,000 - < \$50,000
- \$50,000 - \$100,000
- > \$100,000

Permit rates vary depending on the type of lot (gated or non-gated) and type of designation such as all-gated. The permit rates for parking on the main campus range from \$312 to \$2,154.



Commuter and resident students also are required to have a permit to park on campus. The number of student permits offered for sale is limited. First year students are not eligible to park on campus and students living off campus, within a two-mile radius of campus, are not eligible to purchase a parking permit.

Parking permits for commuter and resident students vary from \$318 - \$685 per year. The number of on-campus parking permits issued to students is not expected to change significantly over the next five years.

6.3.2 Parking Permit Revenues

In the academic year 2010/11, the University has budgeted to receive approximately \$11.3 million in revenue from the sale of parking permits. The UNC Transportation and Parking System is completely receipt supported and receives no State or outside funding. Parking revenues are used to manage and maintain the Parking System, including debt service on parking structures.

The rates for parking permits were last increased in the 2009/10 academic year.

6.3.3 Night Parking

Night parking restrictions vary across the campus. Some lots offer unrestricted parking on weekends and after 5:00 PM on weekdays, and parking in other lots is allowed after 9:00 PM on weekdays. Information regarding the hours of operation is displayed on the signs located at the entrances to each lot.

Due to the number of graduate students with laboratory projects and night classes, in addition to the night shifts of other departments on campus, as well as the Healthcare System, there is a demand for evening parking. While a number of the evening users possess permits, a significant number of vehicles parked at night did not have permits. The Parking System incurs expenses while providing night parking (e.g., security, lighting, and parking lot cleaning). However, evening users not holding a valid permit are not currently contributing to the costs of the Parking System.

6.3.4 Comparison with Other Institutions.

Research was undertaken to assess how the parking rates at UNC compare with the parking rates at other peer institutions. The results of that research are shown in Table 6.3.1.



In general, the rates for residential students appear low in comparison to most other peer institutions. The permit rates for commuter students appear to be generally comparable. The range of rates for faculty/staff permits are among the highest of the peer institutions—trailing only Harvard and UCLA.

Table 6.3.1 – University Range of Permit Rate Comparison⁶

University	Student Permit (On-Campus)		Student Permit (Commuter)		Faculty Permit	
	Min	Max	Min	Max	Min	Max
Duke University	\$240	\$240	\$240	\$240	\$6.80 (monthly)	\$62.50 (monthly)
ECU	\$168	\$336	\$96	\$168	\$156	\$336
Harvard University	\$2,295	\$2,580	\$1,245	\$2,490	\$1,245	\$2,490
NCSU	\$180	\$292	\$99	\$306	\$318	\$999
Ohio State University	\$345	\$535	\$85	\$629	\$89	\$684
UNC	\$318	\$685	\$318	\$685	\$312	\$2,154
UCLA	\$984	\$984	\$780	\$780	\$150	\$1,410
University of Florida	\$134	\$134	\$134	\$134	\$144	\$1,014
University of Iowa	\$288	\$288	\$180	\$288	\$20 (monthly)	\$165 (monthly)
University of Michigan	\$202	\$202	\$72	\$629	\$72	\$1,486
University of Minnesota	\$34 (monthly)	\$34 (monthly)	\$66 (monthly)	\$138 (monthly)	\$66 (monthly)	\$138 (monthly)
University of Virginia	\$192	\$444	\$192	\$468	\$192	\$588
University of Wisconsin	\$495	\$495	\$495	\$1,085	\$495	\$1,085

⁶ Data collected from university websites, Summer 2010.

6.3.5 Summary of Parking Permit Program

The budgeted revenue from parking permits for the 2010/11 year is \$11,277,000. The fees for permit parking were raised in the 2009/10 academic year and are among the higher permit ranges when compared to peer institutions permit price ranges. Based on this comparison and the significant increases incurred from the previous 5-Year Plan, it is recommended that rates be held at their present levels for two more years with moderate increases thereafter during the 5-year plan period.

6.4 Visitor Parking

The campus hosts a large number of visitors every day who come for a variety of reasons. Hospital patients, potential students, alumni, and many other groups of people come to visit, receive medical care, and transact business. With regard to visitors, the University of North Carolina at Chapel Hill Development Plan and subsequent updates states:

“The needs of visitors, particularly hospital patients and visitors will continue to be satisfied on the Main Campus.”⁷

As shown in Figure 6.4.1, visitors to the campus have a variety of parking options. Hospital patients and visitors may park in the surface lots in front of the Memorial hospital and Cancer hospital or in the Dogwood Parking Deck, located across Manning Drive from the hospital. Surface parking is provided at the Ambulatory Care Center (ACC). University visitors may park in the Swain Lot, Morehead Lot, Highway 54 Lot, or in the Rams Head Deck. Limited, on-street metered parking is provided at the locations shown in the map (Figure 6.4.1).

Valet parking is provided at the main UNC Hospitals building and at the Cancer Hospital.

6.4.1 Rates and Revenue

The current rate for hourly parking at all locations is \$1.50 per hour (one-half hour of parking may be purchased at locations where parking meters are in use). The daily maximum for parking in the Dogwood Deck, ACC lot, and UNC Hospitals front lot is \$8.00. Valet parking is \$10.00 per vehicle per day. There is no daily maximum in the

⁷ The University of North Carolina at Chapel Hill, Annual Development Plan Report on Transportation, December 2009

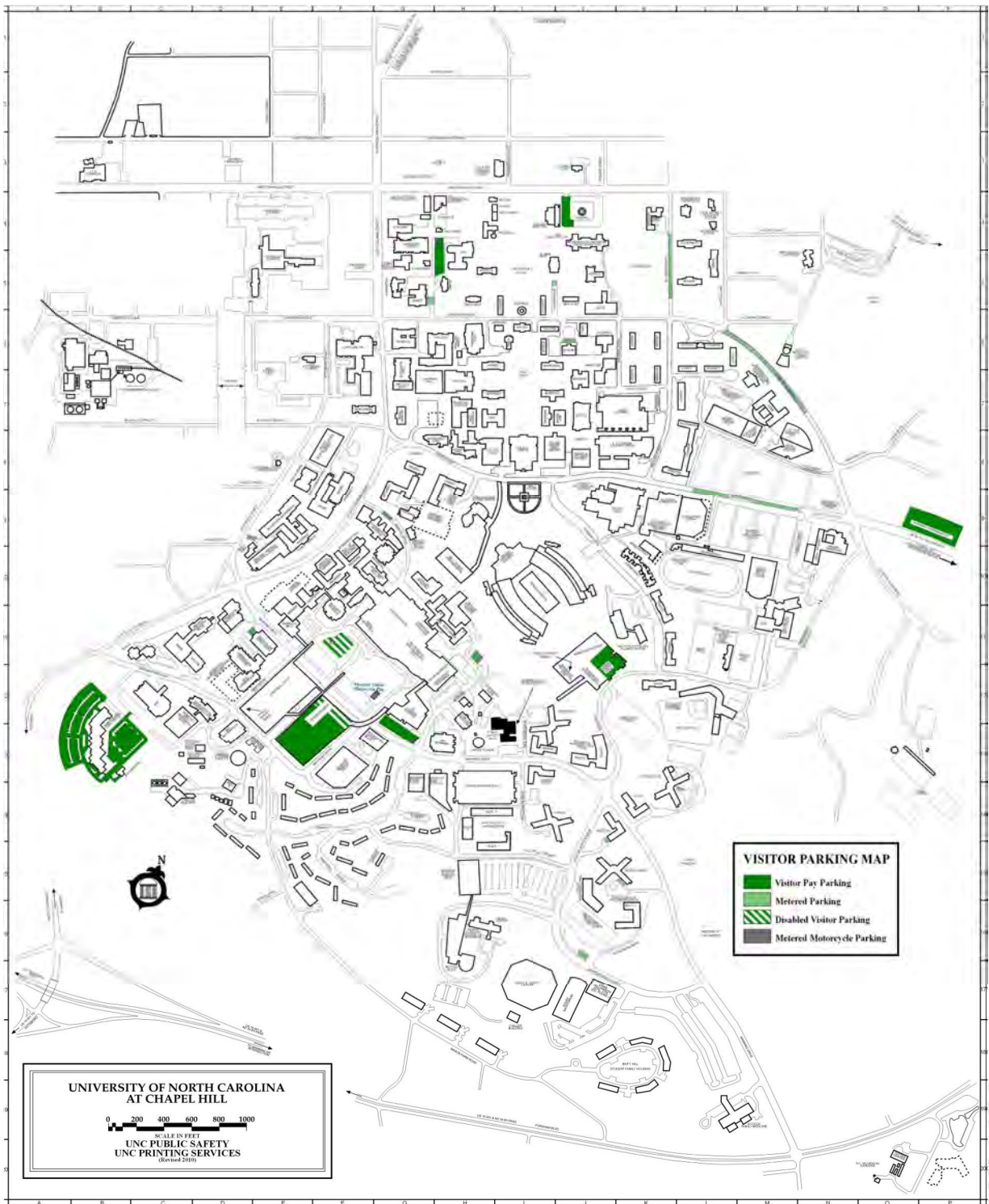
other parking facilities.

Visitor rates were last modified in 2009. In addition, the daily maximum was last increased in 2009. At present, the visitor parking facilities are near capacity. The demand and, therefore, the revenue, are projected to increase only modestly during the five-year planning period.

The budgeted revenue from patient/visitor parking fees for the 2010/11 year is \$5,010,000.



Figure 6.4.1 – Visitor Parking on UNC Campus



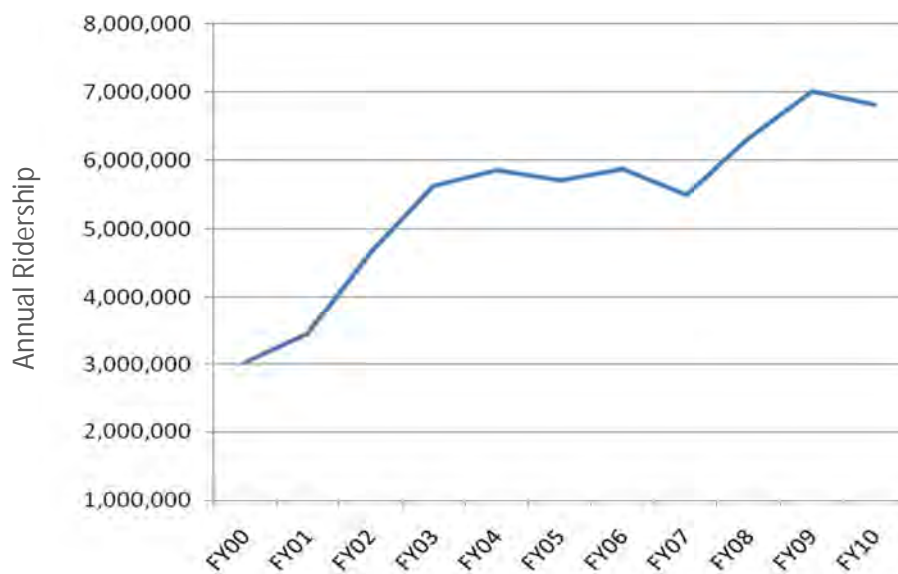
6.5 Transit Operations

The University is currently served locally and regionally by Chapel Hill Transit (CHT) and Triangle Transit (TT), respectively.

6.5.1 Chapel Hill Transit

Chapel Hill Transit has continued to grow in popularity, with ridership among employees and students steadily on the rise. As shown in Figure 6.5.1, ridership has grown almost 60% since fare free boarding was introduced in 2002 and Chapel Hill Transit now carries nearly 7 million riders annually.

Figure 6.5.1 – Chapel Hill Transit Ridership⁸



Chapel Hill Transit is a fare free system to the users at boarding. CHT does not distribute passes and does not collect fares at the point of entry; rather, anyone is welcome to ride with no fare charged. Since no fares are collected, Chapel Hill Transit is funded from a series of other sources. First, CHT solicits and receives federal and state funding for the Transit System. The costs of the System that are not covered by federal and state funding are then paid by the three System partners: the University, the Town of

⁸ Chapel Hill Transit, 2000 -2010

Chapel Hill, and the Town of Carrboro. For CHT services from July 2009 – June 2010, the University contributed \$5,828,500 for the operation of the CHT Transit System. This amount included 100% of the costs for the ten routes that are fully allocated to the University, plus the 38.69% annual proportion for FY 2009-10 of the base System cost shared by the partners.⁹

To meet this expense, the University collects annual transportation fees from students and University departments (to cover the cost of employees). These fees are not sufficient to cover the expenses for this service, so parking revenues are used to make up the remainder. For 2010/11 parking revenues are budgeted to subsidize transit operations by approximately \$1,500,000.

Based on current plans, neither CHT nor TT has any major System service expansions planned in the next 5 years. However, they do have plans for minor modifications to their existing operations that will affect the Department of Public Safety's parking program and budgets in the 5-year plan period.

Due to the limited availability of on-campus parking, the University depends heavily on Chapel Hill Transit to provide access to the campus for the community. This role will continue in the future. Since the inception of the fare free system, the Local Transit System has experienced a continued increase in ridership.

The project team met with CHT to understand their plans for the next five years. In an effort to continue the increase in overall ridership experienced in recent years, and to provide improved levels of service, CHT intends to add services to and from Carrboro. It is anticipated that this will help to reduce additional parking demand on campus, as employees and students commuting from Carrboro would have a transit alternative to driving their personal vehicle.

Other anticipated service changes include increased weekend and Sunday services, services along Highway 15/501 and Highway 54 corridors, and marketing and customer service initiatives.

These changes to Chapel Hill Transit, in conjunction with overall projected increases in operating expenses for items such as salaries, replacement of buses, and fuel, will increase overall operational expenses. The additional expense will be shared between the University, the Town of Chapel Hill, and the Town of Carrboro. Table 6.5.1 outlines the contributions that each entity provides to Chapel Hill Transit for operations and the

⁹ 2009/10 Agreement for Public Transportation Services; an Agreement between the Town of Chapel Hill and the University of North Carolina at Chapel Hill

corresponding 5-year projection of that contribution based on preliminary expense projections provided by CHT.

Table 6.5.1 – Chapel Hill I Transit Costs

	Contribution Percentage	2009/10 Contribution	Projected 2015/16 Contribution
UNC-CH	58%	\$ 5,828,500	\$ 8,566,100
Town of Chapel Hill	32%	\$ 3,220,600	\$ 4,733,300
Town of Carrboro	10%	\$ 1,032,800	\$ 1,517,900
Total	100%	\$ 10,081,900	\$14,871,800

While final negotiations for actual expense budgets in future years have not been finalized, these preliminary projections indicate the University's portion of the CHT budget is projected to increase approximately 44% by 2015/16.

Transit services have a great impact to on-campus parking demand. Transit ridership by employees and students reduces the demand for on-campus parking, and is one component of an overall sustainable Transportation and Parking System for the campus. However, as a result of the limited on-campus parking, the parking demand increases at park and ride lots. Currently, a few of these lots have existing capacity to handle increased demand, while many of the lots are at or close to full capacity.

6.5.2 Triangle Transit

Triangle Transit has 23 weekday routes and 4 weekend routes that service Durham, Raleigh, Cary, Apex, Garner, Research Triangle Park, and the Raleigh-Durham International Airport. With transfers available at the Triangle Transit Regional Transit Center in the Research Triangle Park (RTP), transit service to UNC is available from points throughout the region. University students, faculty, and staff may apply for and receive a "GoPass" to ride the TT system at no charge through the Commuter Alternatives Program (CAP) administered by the Department of Public Safety. There are currently 1,700 employees and 700 students with a "GoPass".



The costs associated with these passes and the use of TT is subsidized by the University and is paid on a per-ride basis, rather than a flat fee per pass. As defined in the agreement between the University and TT, the University reimburses TT at a rate of 52.5% of the standard \$2 full-fare, or approximately \$1.05 per ride.¹⁰ During the 2010/11 academic year, the University will pay TT \$20,600 per month based on the projected ridership and usage through the GoPass. The actual cost associated with this program is adjusted at year's end based on actual cost data provided by TT and actual boardings using the GoPass cards distributed by the University. This data is then used to set the estimated cost to the University for the following year. (Note: TT is planning to request an increase in the reimbursement rate from 52.5% to 55% for the 2011/12 academic year.)

The GoPass program became a fare free service at boarding to members of the CAP in August 2006 and has seen continued growth as shown in Figure 6.5.2.

Figure 6.5.2 – GoPass Usage



¹⁰ GoPass Program Agreement. July 2010.

6.5.3 Summary of Transit Operations

In 2010/11, transportation fees received from students and departmental fees were budgeted to be \$1,500,000 less than the fees paid to Chapel Hill Transit, Triangle Transit / Piedmont Authority for Regional Transportation, and Point to Point for transit services. According to data provided by the transit providers, the costs for transit services for the University are projected to increase over the next five years. The projected increase by 2015/16 for transit services provided by CHT is approximately \$2.6 million; the projected increase by 2015/16 for all other regional transit providers for services is approximately \$270,000. Additional financial resources must be found to fund these services in order to maintain the present level of transit services to the University.



6.6 Park and Ride Operations

6.6.1 Park and Ride Lots

The University of North Carolina at Chapel Hill Development Plan required additional park and ride spaces in the Chapel Hill area. The required supply increase has been satisfied by the construction of the Friday Center Lot (871 spaces), Jones Ferry Road Lot (443 spaces), Hedrick Lot (278 spaces), and Chatham County Lot (550 spaces).

Since parking is limited on main campus, park and ride lots are an important element of the transit operations in the community. The Town of Chapel Hill and the University independently each own park and ride lots that are used by transit riders. Table 6.6.1 outlines the current inventory and operating occupancy in 2009 of park and ride lots used by the Local Transit System.

Table 6.6.1 – Current Park and Ride Lots

Lot Name	Number of Stalls	2009 Occupancy	Occupancy Rate
Chapel Hill Transit Park and Ride Lots			
Eubanks	400	201	50%
Carrboro Plaza	145	132	91%
Jones Ferry	443	240	54%
Southern Village	400	332	83%
<i>Total CHT Occupancy</i>			65%
UNC Park and Ride Lots			
NC-54 East	512	505	99%
Friday Center	871	867	100%
Chatham County	550	215	39%
Franklin Street	67	67	100%
MLK Boulevard	40	39	98%
<i>Total UNC Occupancy</i>			83%

A parking lot is considered full when the occupancy rate exceeds 85%. As seen in this table, most of the lots operated by UNC (the exception being the Chatham County lot) are presently operating at or near capacity. While some lots are at or near capacity,



the System as a whole is slightly under 85% utilization. Thus the perception is that the UNC park and ride lots, with the exception of the Chatham County lot are “full”.

The University has an agreement with Chapel Hill Transit to provide transit services to University-owned park and ride lots. This agreement requires that the University pay 100% of the dedicated University routes and 38.69% of the budgeted annual net cost of the CHT system. The lots, and the routes serving them, are shown in Table 6.6.2.

Table 6.6.2 – UNC Park and Ride Lots and Routes

Park and ride Lot	Route
Friday Center	FCX & V
NC 54	HU & S
Hedrick Building	HU
725 Lot	G, NS, NU, T
Chatham County	CCX
Franklin Street	CL,D, F, & M

University commuting student, faculty, and staff are required to be members in the Commuter Alternatives Program (CAP) and display a park and ride permit to park in the UNC park and ride lots. While the University Transportation and Parking System incurs the expense associated with maintaining and operating the lots, there is currently no fee to the user for this permit.

A summary of the operations of each University park and ride lot follows.

Friday Center

The Friday Center park and ride lot is located on NC 54 at The William and Ida Friday Center for Continuing Education at 100 Friday Center Drive, approximately two miles from the main campus. The lot contains 871 parking spaces. A 2009 parking occupancy count found 867 vehicles parked in this lot resulting in 99% occupancy. The Friday Center is served by Chapel Hill Transit’s FCX express route and the V route.



AM peak hour express service is provided from the Friday Center Lot to Manning Drive at the Dogwood Parking Deck and to South Road at Fetzer Gymnasium on the following schedule:

- 5:15 am – 6:30 am – Service on 30 minute headways
- 6:45 am – 9:10 am – Service on 5 minute headways
- 9:20 am – 10:00 am – service on 10 minute headways

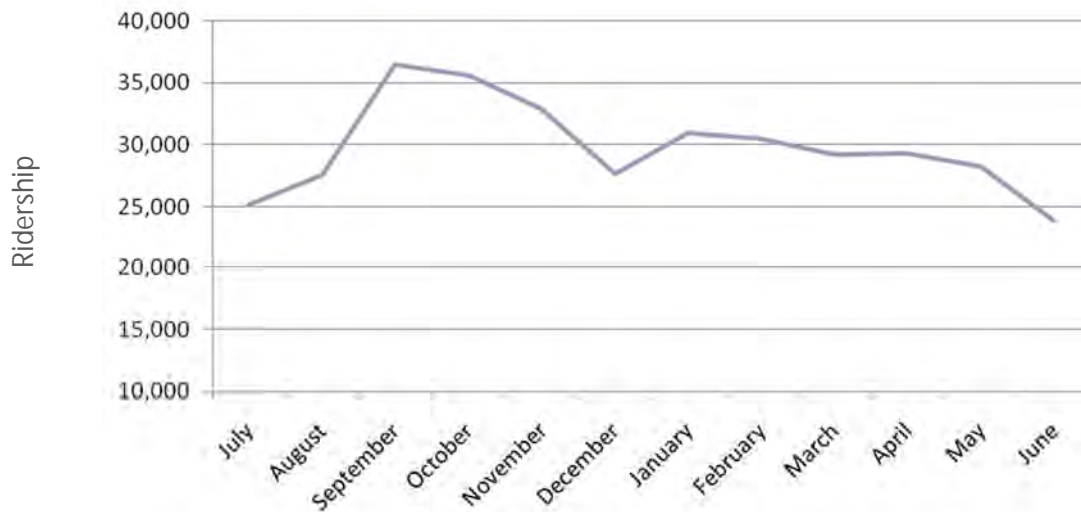
During off-peak hours (between 10:00 am and 3:30 pm) patrons may access the Friday Center Lot on either the FCX or V routes. Off-peak headways are approximately 30 – 40 minutes.

In the PM peak hour, express service is provided from the stop at Manning Drive at the Dogwood Parking Deck on the following schedule:

- 2:25 pm – 3:25 pm – Service on 30 minute headways
- 3:25 pm – 6:55 pm – Service on 10 minute headways
- 7:10 pm – 8:10 pm – Service on 15 minute headways

2009/10 ridership on the FCX totaled 357,723. Ridership by month on the route is shown in Figure 6.6.1.

Figure 6.6.1 – FCX Express Route Ridership (2009/10)¹¹



¹¹ Source: Chapel Hill Transit

The cost of express bus service for the FCX is defined in the agreement between the University and Chapel Hill Transit. In 2009/10, the University paid Chapel Hill Transit \$471,300 for FCX express route services.

NC 54 East Park and Ride Lot

The NC 54 Park and Ride Lot is located at Friday Center Drive and NC 54, approximately two miles from the main campus, and contains 512 spaces. A 2009 parking occupancy survey found 505 vehicles parked in this lot resulting in a 98.6% occupancy rate. Another UNC park and ride lot is located nearby at the Hedrick Building. This lot contains 278 spaces. A 2009 parking occupancy survey found 278 vehicles parked in this lot, resulting in a 100% occupancy rate. The NC 54 East Lot is served by the CHT HU Express route and by the S route.

AM peak hour express service is provided on the HU route from the Hedrick Building and NC 54 East Lot to the Ronald McDonald House (approximately 11 minutes from the Hedrick Building) and Manning Drive at UNC Hospitals (approximately 19 minutes from the Hedrick Building) on the following schedule:

5:20 am – 6:00 am – Service on 40 minute headway
 6:00 am – 7:50 am – Service on variable headways: 10 – 20 minutes
 7:50 am – 8:45 am – Service on variable headways: 10 – 15 minutes

AM peak hour service is provided on the S route from the NC 54 East Lot to the stop at Manning Drive at the Dogwood Parking Deck (approximately 16 minutes from the 54 East Lot) on the following schedule:

6:20 am – 10:15 am – Service on variable headways: 10 – 15 minutes

During off-peak hours (between approximately 9:00 am and 3:30 pm) patrons may access the Hedrick Building and NC 54 East lots on either the HU or S routes. Off-peak headways range from 15 to 40 minutes depending on the time and route.

PM peak hour express service is provided on the HU route from Manning Drive at UNC Hospitals on various headways ranging from 7 minutes to 22 minutes from 3:04 pm to 6:35 pm.

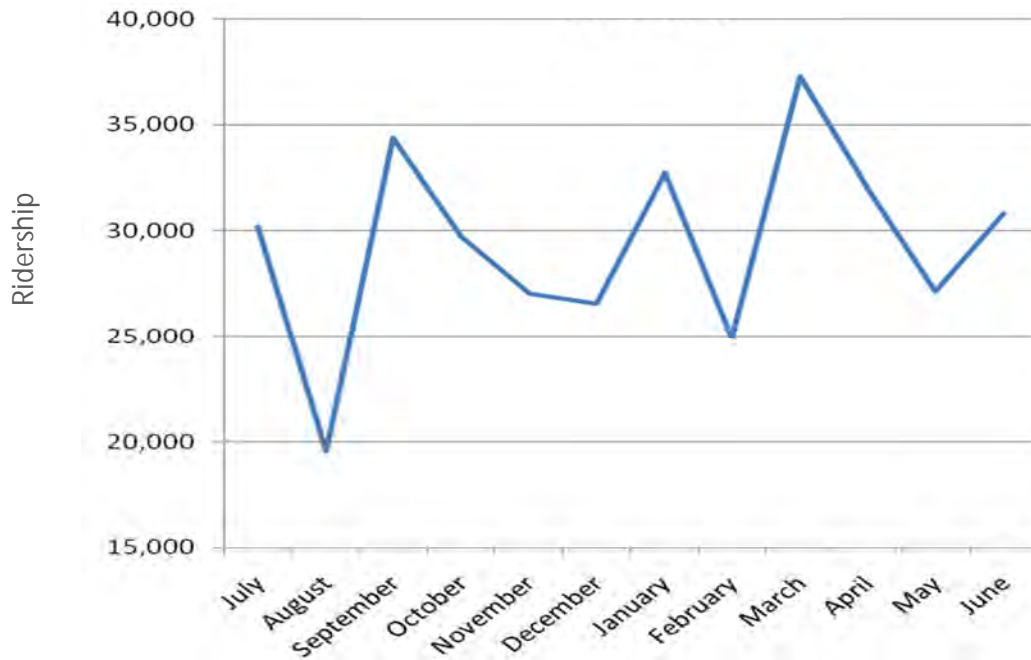
PM peak hour service is provided on the S route from Manning Drive at the Dogwood



Parking Deck on various headways ranging from 7 minutes to 18 minutes from 3:32 pm to 7:06 pm.

2009/10 annual ridership on the HU, NC 54 East Express Route totaled 352,325. Monthly ridership on the route is shown in Figure 6.6.2

Figure 6.6.2 – HU Express Route Ridership (2009/10)¹²



The cost of express bus service for the HU is defined in the agreement between the University and Chapel Hill Transit. In 2009/10, the University paid Chapel Hill Transit \$420,400 for the HU express route services.

725 Park and Ride Lot

¹² Source: Chapel Hill Transit

The 725 Park and Ride Lot is located at 725 Martin Luther King Jr. Boulevard. The lot contains 40 parking spaces. A 2009 parking occupancy count found 39 vehicles parking in this lot resulting in a 98% occupancy rate. The 725 Park and Ride Lot is served by the Chapel Hill Transit's G, HS, NS, NU, and T routes. From this lot, a number of destinations can be reached on Chapel Hill Transit including:

- UNC Hospitals
- University Mall
- Downtown Chapel Hill
- Chapel Hill High School

Since Chapel Hill Transit reports ridership data by route, it was not possible to determine the number of users of the 725 lot who board the G, HS, NS, NU and T routes.

Chatham County Park and Ride Lot

The Chatham County Park and ride lot is located on US 15-501 near Old Lystra Road north of Fearington Village. The lot contains 550 parking spaces. A 2009 parking occupancy count found 215 vehicles parked in this lot resulting in a 39% occupancy rate. The Chatham County Park and Ride Lot is served by Chapel Hill Transit's CCX Express route. AM peak hour express service is provided from the Chatham County Lot to Manning Drive at the Dogwood Parking Deck and to South Road at the Student Union on the following schedule:

6:00 am – 9:00 am – Service on variable headways: 5 – 15 minutes

During off peak hours (between 9 am and 3 pm), service is provided on 40 minute headways.

In the PM peak hour, service is provided from Manning Drive at the Dogwood Parking Deck and from the Student Union to the Chatham County Park and Ride Lot on the following schedule:

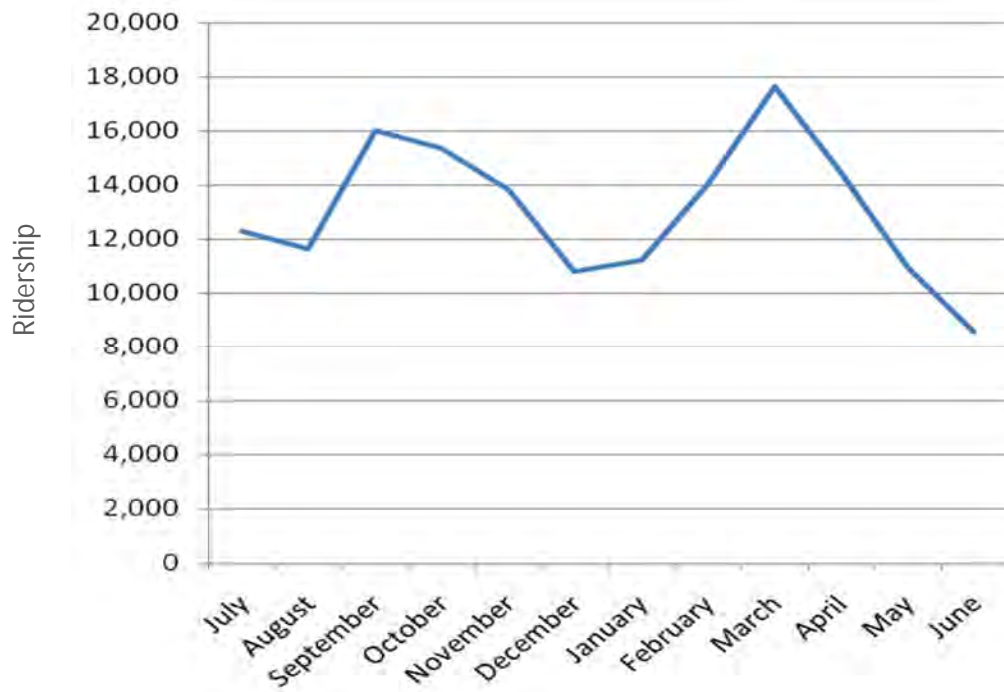
6:00 am – 9:00 am – Service on variable headways: 15 – 30 minutes

FY 2010 annual ridership on the Chatham County Express Route totaled 156,730. Monthly ridership on the route is shown in Figure 6.6.3¹³.

Figure 6.6.3 – Chatham County PNR Monthly Boardings (2009/10)

¹³ Source: Chapel Hill Transit 2009-2010 Ridership information.





The cost of express transit service is defined in the agreement between the University and Chapel Hill Transit. In 2009/10, the University paid Chapel Hill Transit \$490,700 for the CCX express route services.

Franklin Street Park and Ride Lot

The Franklin Street Park and Ride Lot is located at 1211 East Franklin Street. The lot contains 67 parking spaces. A 2009 parking occupancy count found 67 vehicles parked in this lot resulting in 100% occupancy. The Franklin Street Park and Ride Lot is served by the CL, D, and F Routes. A number of destinations can be reached from this lot via Chapel Hill Transit, including:

- UNC Hospitals
- University Mall
- Downtown Chapel Hill



Since Chapel Hill Transit reports ridership data by route, it was not possible to determine the number of users of the Franklin Street Park and ride lot who board the CL, D, and F Routes.

6.6.2 Park and Ride Lot Summary

The University's park and ride lots are well utilized. Express bus service is provided to most lots on frequent headways during peak periods.

The department and student transportation fees do not currently cover the expenses of the transit services. In addition, since there is no fee for parking at the University's park and ride lots, there is no revenue source to offset the expenses associated with the operation and maintenance of these parking lots.

6.7 Budgeted Revenue vs. Expense

In Section 6.1 of this report, the 2011 fiscal year expenses and revenues were listed. The following tables project revenue and expense data for the years 2011/12 through 2015/16. Table 6.7.1 shows the financial projection assuming the following:

- 3% annual operating expense increase
- No increase in transit expense
- No increase in debt service
- Static revenue increases based on population growth
- 0.25% increase in patient/visitor parking revenue

Table 6.7.1 – Financial Projection – No Major Modifications

	2011/12	2012/13	2013/14	2014/15	2015/16
Revenue	\$22,628,501	\$22,654,272	\$22,681,194	\$22,706,687	\$22,729,196
Expense	\$22,505,093	\$22,787,613	\$23,102,693	\$23,267,602	\$23,497,389
Surplus / (Deficit)	\$123,409	(\$133,341)	(\$421,499)	(\$560,915)	(\$768,193)

As evident in Table 6.7.1, the financial deficit to the Transportation and Parking System



over the 5-year plan period would be approximately \$768,000 in 2015-16 if the obligatory expenses remain fairly consistent. However, as described in the previous section of this report, there will be increases in transit expense and debt service, in addition to the increases listed above. The projections in Table 6.7.2 assume the following additional projections:

- CHT and TT expense increase based on projections furnished by the service providers
- Construction expansion of the Craige (990 Employee Spaces) and the Gravely (400 Patient / Visitor Spaces) parking decks

Table 6.7.2 – Financial Projection – Increased Transit/Debt Service

	2011/12	2012/13	2013/14	2014/15	2015/16
Revenue	\$22,628,501	\$22,654,272	\$22,681,194	\$22,706,687	\$22,729,196
Expense	\$22,862,267	\$23,837,441	\$25,204,396	\$27,595,442	\$29,233,738
Surplus / (Deficit)	(\$233,756)	(\$1,183,169)	(\$2,523,202)	(\$4,888,755)	(\$5,604,543)

It is evident from the above table that the projected financial deficit over the next 5 years for the Department of Public Safety is substantial, with expenses outpacing revenues by 29%.

Using these assumptions, as well as no major modifications to revenue streams, the overall financial deficit by 2015/16 is approximately \$6.5 million.

Addressing the financial deficit over the 5-year study period and providing a foundation for financial stability in the years beyond is the basis for recommendations from this study. The following sections of this report outline the options investigated and describe the implementation methods recommended to meet this goal.

7. Distribution of Costs to Users



This chapter will review the current distribution of costs among the users of the Transportation and Parking System.

7.1 System Users

The University operates a Transportation and Parking System consisting of two distinct components: parking and transit. Each of those components can be further divided into user groups.

For the Transit component, the user groups are:

- Local Transit users
- Regional Transit users
- Express bus users
- Vanpools

For the Parking component, the users groups are:

- Permit holders (proximate parking)
- Visitors/patients
- Park and ride lot users

Park and ride users are members of both parking and transit components of the system.

7.2 Transportation Mode Subsidies

UNC strongly encourages the use of alternative transportation through its parking and transportation policies. Due to the limited availability of parking on the main campus and the impacts of building new parking facilities—as well as the transportation network to support them—UNC has established an aggressive stance providing toward multiple modes of access to and from the main campus. The systems that are used include:

- Chapel Hill Transit – UNC is a partner in the Chapel Hill Transit System, which offers local fare free service in the Chapel Hill/Carrboro community.
- Triangle Transit – UNC provides a “Go Pass” card to participants and



reimburses Triangle Transit the fare for students and staff to ride the Regional Transit System.

- UNC offers a \$20 monthly subsidy to eligible vanpool participants.
- UNC provides free parking on campus to vanpool participants
- UNC provides free parking for users of the park and ride lots.

All of these programs represent a cost to the System that exceeds the fees collected and are, therefore, subsidized by the parking revenues. The purpose of this section is to calculate the cost of these services compared with the revenue by mode, in order to understand the level to which each mode is being subsidized.

7.2.1 Expense and Revenue Background

7.2.1.1 Transit Expense

The University, along with the Towns of Chapel Hill and Carrboro are partners in the Chapel Hill Transit System and the costs borne by each partner are defined in an annual operating agreement between the partners. The 2009/10 cost distribution among the partners is shown in Table 7.2.1.

Table 7.2.1 – Transit System Cost Distribution 2009/10¹⁴

Item	Amount
Total Chapel Hill Transit Expenditures	\$15,450,929
Total External Revenue (State and Federal grants)	\$ 5,470,322
Local Net Cost	\$10,118,944
<i>Total Share per Partner</i>	
Town of Chapel Hill	\$ 3,220,607 (32%)
Town of Carrboro	\$ 1,032,825 (10%)
University of North Carolina at Chapel Hill	\$ 5,828,502 (58%)

The amount contributed by UNC represents approximately 58% of the Transit System's

¹⁴ Cost Distribution from 2009/10 Agreement for Public Transportation Services between Chapel Hill Transit and UNC.

cost. The contract for 2010/11 is essentially unchanged from the previous year, with UNC's cost share increasing only slightly to \$5,930,168.

Per agreement with Triangle Transit, the system provides a GoPass for eligible students and staff to ride the Regional Transit System. DPS distributed 1,453 GoPasses in 2009/10. The University presently pays 52.5% of the standard \$2 boarding fare (\$1.05) based on actual ridership numbers confirmed by Triangle Transit at the end of each year. According to Triangle Transit data, in 2009/10, there were 235,831 GoPass boardings. In 2009/10, the system reimbursed Triangle Transit \$256,290.

To promote the use of ridesharing and vanpooling, the University offers incentives to individuals who participate in vanpools for their commute to campus. Presently, individuals participate in vanpools provided by either the Piedmont Authority on Regional Transportation (PART) or Triangle Transit (TT). The pricing structure for PART and TT are different, but the approximate cost per user is around \$90 per month. UNC provides each participant in a vanpool a monthly subsidy of \$20. There are 156 participants in the vanpool, which represents an annual system expense of \$37,440.

7.2.1.2 System Revenue

UNC has three primary sources to fund parking and transit operations: revenues from parking operations and student and departmental transportation fees. The projected revenues for fiscal year 2010/11 for each revenue source are shown in Table 7.2.2.

Table 7.2.2 – 2010/11 Projected System Revenues for Parking and Transit Operations¹⁵

Revenue Source	Amount
Parking Permits	\$11,277,000
Patient/Visitor Parking	\$ 5,010,000
Departmental Transportation Fee	\$ 2,911,000
Student Transportation Fee	\$ 1,936,000

Students pay a transportation fee that is part of the fee structure included in the bill all

¹⁵ Revenue from proposed 2010/11 budget for the UNC Department of Public Safety

students receive for fees and tuition. In the 2010/11 fiscal year, the transportation fee for each student was \$106.75. The fee is used to support transit services (including the point to point transit (P2P) services) and is not used solely for funding Chapel Hill Transit. Currently, \$73.50 of the fee is dedicated to fare free at boarding transit services. For the fiscal year 2010/11 the student transportation fee is budgeted to generate \$1,936,000 for transit services. Departments pay a Departmental Transportation Fee assessed at 0.208% of payroll. These funds are used to offset the costs of Local, Regional, and Express Transit and Van Pools, plus employee use of P2P services. For 2010/11, this fee generated \$3,161,000 in funding. Employee usage of P2P is budgeted at \$275,000 for 2010/11. Therefore, the departmental transportation fee contributes \$2,886,000 to offset the costs of Local, Regional, and Express Transit and Van Pools.

Parking revenues are budgeted to be \$11,277,000 in 2010/11. These revenues are used to support the expenses associated with operating the parking system as well as subsidizing the transportation services – local, regional, van pool. The subsidy provided by parking revenues is projected to be \$1.469M in 2010/11.

The transit expenses and revenues are summarized in Table 7.2.3.

Table 7.2.3 – Transit budgeted Expenses and Revenues 2010/11

Expenses and Revenue	Amount
Chapel Hill Transit	\$ 5,930,000
Regional (TT, PART) Transit expenses	\$ 387,000
Point-to-point service	\$ 250,000
Total transit expenses	\$ 6,567,000
Departmental transportation fees	\$ 2,911,000
Student transportation t fees	\$ 1,936,000
Total transit revenues	\$ 4,847,000
Transit surplus/deficit	\$ (1,720,000)

The Transportation and Parking System is entirely receipt supported from transportation



fees and parking receipts and receives no state funding. The Departmental and Student transportation fees are not adequate to fund the transit system and alternative modes.

Parking fines are no longer a substantial revenue source for the system due to the requirement to remit fine revenue to the State. A maximum of 20% may be retained, which does not cover the administrative costs for citation issuance and collections. Therefore, parking fines do not contribute significant revenue to the Transportation and Parking System.

7.2.2 Calculation of Mode Subsidies

The cost to the System on a per user basis was calculated for the following modes: Local Transit (Chapel Hill Transit), express transit (including transit costs and parking costs associated with the park and ride lots), Regional Transit (Triangle Transit), and vanpools.

An annual per user cost/value for each mode was calculated, the revenue for each mode (if applicable) was quantified, and a per user mode subsidy was determined, using 2009/10 data. Each of these is described below.

7.2.2.1 Local Transit

In the agreement between the University and the Town, the University pays 100% of the costs of routes that are designated as “fully allocated.” Fully allocated routes are routes that serve riders affiliated with the University, including the express routes from the park and ride lots and the campus circulators. In addition, the University pays a proportionate share of the base Transit System based on relative population. For 2009/10, the University’s share was 38.69%. The annual per rider cost of local transit was calculated by first obtaining the annual ridership on each local route from Chapel Hill Transit. The annual ridership was then divided by two (a two-way round trip was assumed) and then divided by 190 days to reflect a 10-month academic year. While the “U” and “RU” routes are included in the fully allocated routes for purposes of payment, the costs of those two routes and ridership were added to the Local Transit calculation. The ridership characteristics of those routes are more similar to Local Transit routes than express transit.

The fare free nature of Chapel Hill Transit makes it difficult to allocate costs among riders



affiliated with UNC and other riders. Riders are not required to show a pass or any type of identification to ride the system. Ridership information, by route, for each of the local routes is contained in Appendix A. On-board surveys conducted by the University and Chapel Hill Transit find that approximately 83% of the riders of Chapel Hill Transit on local routes are affiliated with the University. If 83% of the 11,603 annual users (9,163) were assumed to be University affiliated, the per-user cost to the University is \$359.38. Therefore, it can be assumed that the “cost” to the University for each rider of Local Transit is \$359 per year.

7.2.2.2 Express Transit

The system provides express transit service from park and ride lots located in Orange and Chatham Counties to the University through its contract with Chapel Hill Transit. In contrast to the shared Local Transit Service, the express service features few, if any, stops from the parking lot to the final destination on campus. The service is fare free for the user, with no charge for either parking at the park and ride lot or for riding the bus. The frequency of bus service depends on the lot location and time of day, but in the peak period service may be as frequent as every five minutes.

The cost to the system associated with express transit has two components: transit cost and parking cost. All of the express transit routes are defined in the agreement between the University and Chapel Hill Transit as fully allocated routes. The costs for those routes are based on the most recent agreement between UNC and Chapel Hill Transit. To calculate the transit cost portion, the cost per route was divided by the estimated users.

Annual 2009/10 ridership data was obtained for each of the express routes from Chapel Hill Transit. The number of annual riders was divided by two (assuming two boardings for a round trip), and by 229 to account for the number of commuting days in a year. A higher number (229) was used for express transit as compared with Local Transit because the majority of the riders on express transit are University faculty or staff and, therefore, are assumed to be using transit services year round. The calculation, shown in Table 2 in Appendix A, finds 4,568 people are served daily on an annual basis by the express Transit System. Dividing the annual net cost for express service (\$2,227,102) by the number of annual users (4,568) yields a per person cost for the express transit service of \$488.

7.2.2.3 Park and Ride



The other cost component associated with express transit and park and ride lots is the cost of the parking lots themselves. There are a number of ongoing operational costs associated with any parking space – be it in a structured parking facility, a surface parking lot, or even an on-street space. Staff has to be employed to manage and maintain the spaces. Security and lighting need to be provided for each facility. Routine maintenance activities such as garbage pick-up and repairs and pavement patching must be undertaken.

The Department of Public Safety maintains a total of 22,240 parking spaces. Dividing the annual expenses of the parking system of \$14,379,945 by the number of spaces in the system provides an estimate of the revenue each space in the system should earn to support the expenses of the parking operation. The “average” annual revenue needed per space is \$647.

The University owns and manages 2,258 parking spaces in five park and ride lots: Users of park and ride lots do not pay a parking fee. Therefore, no revenue is generated by these spaces.

A parking space required revenue of \$647 times the total number of park and ride spaces plus the standard oversell percentage of 25% (2,823) requires the generation of \$1,460,926 revenue, which results in a \$518 value per user. The total annual cost/value of the park and ride commuting option of express transit (\$488) and parking (\$518) results in a total annual value of \$1,006 per user.

7.2.2.4 Regional Transit

As previously stated, GoPass credentials are held by 1,453 individuals and in 2009/10 the system paid Triangle Transit \$256,290. Therefore, the cost/value per pass holder is \$176.39

7.2.2.5 Vanpools

As previously stated, the cost to the system for vanpool participants in 2010/11 was budgeted at \$37,440. In addition to the monetary subsidy, each vanpool is provided with a free parking space for the van on campus. The typical vehicle participating in a van pool is a 12-person van. However, it is assumed that an average vanpool has nine riders. If the \$647 annual cost for a parking space (using the previous calculation) is



allocated among a hypothetical 12-person van with nine riders, the annual per person cost of the parking space is \$72. The annual per user cost to the system for a participant in a vanpool is therefore \$72 (foregone parking fee) + (\$20/month x 12 months {monthly subsidy}) = \$312.

7.2.3 Summary

The different modes of transportation have different costs/values to the System and different levels of user contribution. The annual cost/value to the System by mode is shown in Table 7.2.4.

Table 7.2.4 – Annual Cost/Value per Mode per User

Mode	Annual Cost
Local Transit (CHT)	\$ 359
Express transit (park and ride)	\$ 488
Parking Space	\$ 518
Total Park and Ride	\$1,006
Regional Transit (TT)	\$ 176
Vanpool	\$ 312

The difference between the cost of the service to the System and the fees that contribute towards providing the service is, by definition, the subsidy for the service.

As the system presently operates there are two different types of subsidies. On a “macro” scale, the system is annually using parking revenues to subsidize the cost of the transit system by approximately \$1.5 million dollars. In the next five years, steps should be taken to reduce the amount of parking revenues used to fund transit while maintaining parking fees at a reasonable level.

At the “micro” scale, it is evident from the discussion above that the system subsidizes



the different modes in the transit system at levels that vary from \$176 to \$1,006 per user. The next section contains recommendations on approaches to achieve more equity in the subsidies provided.

7.3 Recommendations for Equalization of Subsidies

The various modes of transportation are subsidized at different financial levels. Considering the University's policies that encourage the use of transit — particularly its support of the park and ride system and its goal of reducing reliance on single occupant automobiles — the differences in subsidy levels should be expected. The issue to be confronted is this: *What financial approaches should be implemented to achieve the University's broader goals while funding the on-going and future obligations of the Transportation and Parking System?*

7.3.1 Parking

Parking revenues are used to assist with the funding of the Transit System. At present, this subsidy is approximately \$1.5 million; the following questions were discussed as part of this study:

- Should the subsidy remain? Or, should transit expenses be funded totally by transit fees?
- If the subsidization of transit by parking remains, what percentage, or dollar amount, of parking revenues should be allocated to transit?

A brief review of modifying transportation fees to fund transit expenses (and thus eliminating the subsidy from parking) was conducted. It became readily apparent that this approach would result in significant increases in transportation fees to both the students and departments over the next five years to eliminate the subsidy and support the projected increases to the existing service.

At present, the \$1.5 million dollar parking subsidy of the Transit System represents approximately 20% of the Transit System costs. If the percentage subsidy were held constant, given the projected increases in transit expenses, approximately \$800,000 additional dollars (or a total of approximately \$2 million dollars), would need to come from the Parking System revenues in year 2015/16 to assist with the funding of transit. As noted in Chapter 6, the existing parking permit rates are relatively high compared to



peer institutions. Funding transit cost increases, projected capital construction, and general inflationary increases through increasing parking rates (both visitor and permit rates) results in an unsustainable pricing structure. If parking revenues were to be used to fund 20% of the transit system cost in the next five year period, the resulting parking permit rate would be so high that it would be inconsistent with market demand.

After analysis, review, and input from representative groups, the decision was made to reduce the parking subsidy incrementally over time. For this 5 year plan, the annual subsidy target is \$1 million by the year 2015/16, resulting in an approximate \$500,000 decrease in the subsidy. There was significant support from stakeholders to evaluate the parking subsidy in future planning efforts to further reduce or eliminate this subsidy.

7.3.2 Local Transit

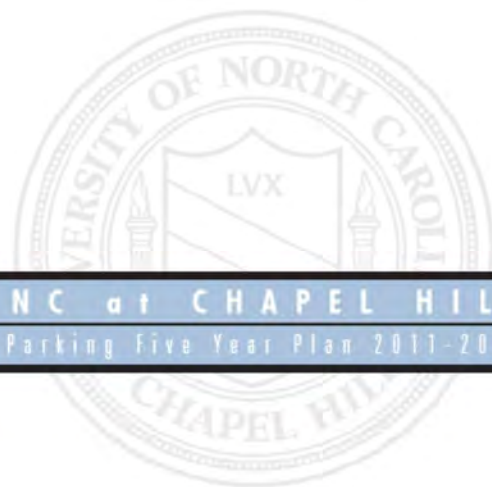
One of the guiding principles of this plan is the University's continued commitment to a fare free Chapel Hill Transit System. Therefore, the implementation of a fee-based ridership system (while suggested in public forums as a possible alternative to fee increases) was not considered as being consistent with the University's commitment to sustainable alternatives to driving to campus.

As shown in Table 7.2.4, the existing cost to the system for Local Transit is approximately \$359 per rider per year. Ridership surveys conducted by Chapel Hill Transit, show that students constitute a majority of the ridership of the Local Transit System. The departmental transportation fee contributes approximately \$1 million dollars more to the Transit System than the student transit fee. In order to more equitably distribute the cost of the transit services between the user groups, it is recommended that revenues from student transportation fees more closely mirror the utilization of transit services by user groups.

7.3.3 Express Transit/Park and Ride

As shown in Table 7.2.4, the express transit/park and ride system is the most heavily subsidized transportation mode. The Transit System offers frequent service to park and ride lots, at a higher cost than Local Transit. In addition, no parking revenue is received from these park-and-ride lots since both parking and transit are free.

Express transit services are subsidized at a higher rate per user than local transit services. As previously stated, a guiding principle is for transit services to remain fare free. Based on the significantly higher subsidy for this mode, it is recommended that a fee for



parking in the park and ride lots be implemented to help offset expenses associated with the parking component of the system. In order to maintain the appropriate incentives and balance within the parking and Transit System, the fee should be less than on-campus parking. In addition, daily fee parking spaces should be provided at the park and ride lots in order to accommodate the occasional System user.

Park and ride lots are also provided by the Town of Chapel Hill and heavily used by the University community. The University and Town should work together on a policy to implement uniform parking fees for all park and ride lots served by Chapel Hill Transit to avoid an imbalance in the System.

7.3.4 Regional Transit and Vanpool Programs

The combined financial obligation of these two modes over the next five years is not projected to be significant. It is recommended to establish a policy for subsidy amounts for future services of this type. For example, if transit or vanpool services were to be offered to UNC from outlying areas (e.g. Fayetteville) a per person subsidy of \$300 - \$400 per year should be established.

It is recommended that future transit or vanpool services be funded at a level equitable to the current subsidies provided. Transit costs necessary to provide potential future services above the per person subsidy level should be the responsibility of the user group.

It is recommended that the use of Regional Transit and vanpool services be monitored during the next five years for usage trends that may necessitate changes in the financial policies.

7.4 Summary of Recommendations

In summary, future updates of the plan should evaluate the transit and parking components of the system with a goal to make each self-supporting. In addition, alternative future transportation services should be evaluated based on known costs and compared with the costs of existing services.

The following recommendations are made with respect to subsidies:



7.4.1 Parking Revenues to subsidize transit

The use of parking revenues to subsidize transit operations should be reduced by \$500,000 and evaluated for future reduction or elimination. The goal is to reduce the annual subsidy from parking operations to transit to \$1million by 2015/16.

7.4.1.1 Local Transit

In order to more equitably allocate the costs of transit service to the users, the Student and Department transportation fees should approximately represent the users group utilization of that service.

7.4.1.2 Park and Ride

Due to the cost to operate and maintain parking spaces, the establishment of a permit fee to defer some of the costs is proposed for implementation

7.4.1.3 Regional Transit and Vanpool

Future requests for vanpools and/or regional transit services should be funded at a level similar to the funding provided for existing comparable services. The intent for such a policy is to create a standard subsidy for all regional and alternative options such that should additional routes be requested, the cost of that route less the sum of the per person subsidy that route serves would be the responsibility of the user group. These services will be subsidized based on current subsidy ranges and additional costs would be the responsibility of the user group.



8. Initial Options Eval uated

Based on the results of this analysis of the five-year financial obligations for the Transportation and Parking System, a \$6.5 million shortfall exists by the 2015/16 academic year. In order to meet these obligations, the following strategies were identified.

- Increase efficiency within the current operations – Operational efficiencies to reduce costs should be the first step in balancing revenues and expenses. These efficiency gains could lower operational costs, as well as increase revenues with certain operations. The specifics of the identified efficiencies are outlined in more detail below.
- Additional revenue sources – Based on the magnitude of the revenue/expense gap, additional revenue sources are required in order to meet the financial obligations of the System. It was not practical, nor sustainable, to continue to increase only the existing revenue sources to meet these obligations based on the increases implemented in the last 5-Year Plan and how current rate structures compare regionally and nationally. New sources of income needed to be identified to meet the projected financial shortfall associated with System growth and operational increases. The specific sources identified are outlined below.

8.1 Efficiencies

The following operating efficiencies were identified:

8.1.1 Remote Cashiering (Pay Lots)

The expense of collecting revenues manually at each location can be significantly reduced, with the installation of new payment technologies in the surface pay lots. In addition, more consistent hours and collection of revenues can be achieved. The collection of the revenues not only can be completed more efficiently resulting in improved collection rates and more consistent lot control and audit trail.



8.1.2 LED Lighting (Parking Structures)

Light Emitting Diodes (LED) lighting technology has provided an opportunity to reduce the electrical power consumption in the parking decks and surface lots. In addition to the reduction of power consumption, the LED lighting systems offer an opportunity to reduce maintenance costs associated with cleaning and replacing lamps from the existing High-Intensity Discharge (HID) lighting systems. The Bell Tower Parking deck was constructed and opened in the Fall of 2010 with LED lighting technology. So far, the electrical power usage of that deck is proving to be significantly less than existing decks with HID lighting. It is recommended that the lighting systems in each parking structure on campus be retrofitted with LED lighting to realize the long-term projected energy savings that can be realized over the life of the lighting fixtures. Due to the costs of installation, it is recommended that these replacements be phased in over a period of 2 to 4 years.

8.1.3 Meter Pay Stations (On-Street Spaces)

New on-street payment technology is available that will accept both coin and credit card payments. This new technology offers multi-space payment options as well as single space meter payments systems. The multi-space payment systems, along with credit card payment options, provide the opportunity to decrease operational costs associated with maintenance and collection of revenues. In addition, the digital technology creates additional savings through the elimination of "piggy-backing" where a subsequent parker benefits from time left on a meter from the previous parker. Collection data from meter pay station installations in other areas have shown an increase in revenue, with many reporting increases of 15 - 30%. A corresponding decrease in operational expenses is also expected.

8.1.4 License Plate Recognition (LPR) in the Dogwood deck and ACC Lot

The Dogwood Deck and ACC lot currently provide parking for patients and visitors to UNC Hospitals. The current payment systems are manual, with gate controlled lots. If a user loses the ticket, the one-day maximum amount is charged upon exit. Complicating the Dogwood deck situation even further is the suspicion that staff may be trading tickets between staff members during shift changes, thus allowing some staff to pay for short periods of time, while parking during an entire shift. In addition, it is believed that there is a significant abuse of these 2 locations, from staff and students,



who park for longer periods of time, and claim a lost ticket on exit, thus having to pay for only 1 day's parking. The installation of an LPR system will eliminate this type of abuse, resulting in an increase in revenue, and a corresponding decrease in abuse. This will, in turn, result in a larger number of spaces being available for visitors, thereby resulting in an additional increase in revenues.

8.1.5 Electronic Online Method for Temporary Use Permit Issuance

The installation of an online method for requesting and issuing temporary permits will reduce the manpower required to manage this process, as well as reduce the cost associated with printing permits while improving customer service.

Based on a preliminary analysis of these identified efficiency opportunities, it is estimated that an annual savings of approximately \$609,000 can be realized by 2015/16.

8.2 Initial Proposed Funding Strategies

The initial proposed funding strategies were developed in addition to the efficiency strategies outlined above, an additional \$5.9 million in revenue must be identified by the year 2015/16 in order to balance revenues and expenses. The following new funding strategies were identified to generate this additional revenue.

- Bell Tower Visitor's Lot
- Transportation Fee
- Permits
- Park and Ride Permit
- Night Parking Program
- South Campus Daily Maximum

8.2.1 Belltower Visitor's Lot

Currently there are no short-term parking spaces available on the west side of central campus. Converting the small existing lot near the Bell Tower to an hourly lot in 2011/12 can be done relatively easily and will provide short-term parking, a much needed amenity in this area of campus. This lot is projected to generate approximately \$38,000 in annual revenue.



8.2.2 Transportation Fee

In order to reduce the parking subsidy for transit services, an increase is proposed in the student and department transportation fees. The increase would be implemented in 2011/12, with subsequent increases annually through 2015/16 to reduce the parking subsidy down to \$1 million and meet the projected inflationary increases proposed by the local and Regional Transit Service providers. In order to maintain the current 48.1% obligation paid for by department fees to support staff use of the transit services, an average annual increase of \$184 per \$1M payroll is projected for the Department Transportation Fee. The remaining increase in Transportation fees would be placed on the students, with an annual increase in that fee that averages \$14 per year or \$7 per semester over the planning period.

8.2.3 Permits

An increase in permit costs is still needed to meet the increasing costs of the Parking System even after reducing the parking subsidy to transit services. It is proposed that a modest 2% increase annually be placed on all daytime parking permits, thereby maintaining the sliding scale for the existing permit System. The consistent 2% increase across the scale still results in a higher dollar increase for the higher ranges, but only marginally grows the difference in the scales. The UNC permit range proves to be comparable to areas such as Boston (Harvard) and Los Angeles (UCLA) and significant increases are not sustainable.

8.2.4 Park and Ride Permit

The park and ride lots, when coupled with the fare free express transit service to and from those lots is the most expensive commuting option to operate and maintain. It is estimated that the average commuting cost/value is approximately \$1,006 per person (Transit Cost = \$488/person, Parking Space Value = \$518/person). Prior to the Transit System becoming fare free, all park and ride users parked free but had to pay the transit fare, which cost users \$203 annually, to get to campus. When the Transit System converted to fare free, no corresponding parking permit cost was initiated. This has resulted in a System where there is considerable range in subsidized options with the park and ride option being more than double local and regional alternatives. This inequity in subsidy is not sustainable. Therefore, a park and ride permit program is recommended, with an initial annual permit cost of \$250.



8.2.5 Night Parking Program

Currently there is no night time parking program for the main campus. Many users are moving their cars to the campus after 5 pm and parking for free. The System has to cover the costs of operating these lots and decks at night, including security, lighting, and maintenance. It is recommended that a night parking program be initiated to allow the users that are not currently paying into the System to contribute to offset the cost of parking construction, operations, and maintenance. It is not sustainable for daytime permit fees and hourly parking for patients and visitors to continue to pay the entire cost of the Parking System. For those users that are already paying (i.e., day permits, park and ride permits), there will not be an additional charge for the night parking permit. The primary permit will be valid for this use. It is recommended that a night parking permit program be instituted with an annual \$250 permit.

8.2.6 South Campus Daily Maximum

Currently, hourly parking lots which serve patients and visitors to the campus provide a significant revenue stream for the System. Multiple increases on this rate structure occurred during the last 5-Year Plan. Based on a review of the current rates, it was determined that the hourly rates are at or above local market values, and thus it is not recommended that these hourly rates be increased at this time. However, in order to create consistency between the lots on north campus and south campus, it is recommended that the daily maximum for the South Campus lots/decks be increased from \$8 per day to \$10 per day. If this is implemented as recommended during the 2015/16 year, it will have resulted in a six-year period with no increases.



9. Response to Stakeholder Input

As a result of input received during the stakeholder meetings and subsequent forums, the preliminary alternatives discussed above were modified. The following adjustments were evaluated and included in the recommendations for this Plan:

1. Reduce the planned new parking deck construction on campus by 300 spaces. This will result in a decrease in the debt requirements for the System. Due to the unknowns associated with the development of the Gravelly Lot parking deck site, it was recommended that this future deck be decreased in size from 730 spaces to 430 spaces.
2. Delay the 2% daytime parking permit increase from 2011/12 to 2013/14. This will result in a 3-year period of no parking permit increases for this user group.
3. Delay the park and ride permit fee from 2011/12 to 2013/14.
4. Delay the night parking program from 2011/12 to 2014/15.
5. Change the student contribution to the night parking program from a permit cost to a fee-based System. This will distribute the cost of the System across the entire student population, and will help minimize operational costs associated with the management of this program.
6. Reduce the amount of parking revenue used to subsidize the fare-free Transit System from the current \$1.5 million by \$500,000, to a subsidy of \$1 million by the year 2015/16.
7. Keep the Departmental Transit Fee at the current 48.1% obligations as the contract obligations increase.
8. Apply a sliding scale [\(listed below\)](#), similar to the one in place for daytime parking permits, to the park and ride and night parking permits, in lieu of a \$250 flat cost.

Salary Scale	Permit Price
in Thousands	
< \$25,000	\$ 227
\$25,000 < \$50,000	\$ 250
\$50,000 < \$100,000	\$ 300
\$100,000- and greater	\$ 390



- 8.9. _____ Eliminate first-year students from the night parking fee, as first-year students are not permitted to have vehicles on campus. [This eliminates approximately 4,000 students from the night parking fee, and results in an initial fee per student of \\$10.40 annually or \\$5.20 per semester.](#)
- 9.10. _____ Install “Pay and Display” type stations in park and ride lots to allow for a daily use option, rather than an annual permit only option.

10. Recommendations



The final recommendations are a result of the collaborative effort of the Department of Public Safety, working with each of the stakeholder groups, and ACT. Each of the stakeholder groups provided valuable input into the recommendations, and the final recommendations reflect that input and general consensus that was reached. This five-year plan meets the financial obligations projected for the Transportation and Parking System, while maintaining the goals and objectives outlined in the guiding principles at the start of the study.

The final recommendations are as follows:

Bell Tower Surface Visitor Lot

- Implementation date – 2011/12
- Additional 2015/16 estimated revenue – \$38,000
- Convert spaces to hourly visitor
- Accommodates short-term parking need, thereby providing a much needed amenity in the central part of campus

Transportation Fee

- Implementation date – 2011/12
- Additional 2015/16 estimated revenue – \$3,419,449
- Increase departmental and student transportation fees
 - Average annual increase
 - Department – \$184 per \$1.0 million of payroll
 - Student – \$14
 - Average semester increase
 - Department – N/A
 - Student – \$7
- Reduce parking revenue subsidy for transit from \$1.5 million to \$1.0 million, per recommendation by Advisory Committee on Transportation (ACT)

Increase Permit Rates



- Implementation date – 2013/14
- Additional 2015/16 estimated revenue – \$700,000
- 2% annual increase to all permit rates
 - Average annual increase
 - Employees – \$5.70 - \$16.13
 - Students – \$5.78 - \$7.60
 - Average bi-Weekly increase
 - Employees – \$0.24 - \$0.67
 - Students – \$0.24 - \$0.32

Park and Ride Permit

- Implementation date – 2013/14
- Additional 2015/2016 estimated revenue – \$604,200
- Sliding scale with \$250 as a mid-point permit price

<u>Salary</u>	<u>Permit Price</u>
< \$25,000	\$227
\$25,000 - < \$50,000	\$250
\$50,000 - \$100,000	\$300
> \$100,000	\$390

- Student permit rate = \$227

Night Parking

- Implementation date – 2014/15
- Additional 2015/2016 estimated revenue – \$743,000
- Sliding scale with \$250 as a mid-point permit price

<u>Salary</u>	<u>Permit Price</u>
< \$25,000	\$227
\$25,000 - < \$50,000	\$250
\$50,000 - \$100,000	\$300
> \$100,000	\$390

- Student permit rate = \$10.40 annual transportation fee, in lieu of permit, per recommendation by student representative on ACT



- Program details
 - Daytime and CAP permits honored
 - Employees register through department
 - Student register online during registration
 - Intended for Parking System users that only park at night, Monday through Friday

South Campus Daily Maximum

- Implementation date – 2015/16
- Additional 2015/2016 estimated revenue – \$214,000
- Raise daily maximum rate from \$8 to \$10
- This will be a six-year period with no maximum daily fee increase

Table 10.1 outlines the recommendation implementation timeline for each of the above outlined recommendations.

Table 10.1 – Funding Strategy Implementation Timeline

2011/12	2012/13	2013/14	2014/15	2015/16
Convert Bell Tower Lot to visitor parking		Increase daytime permit rates	Introduce night parking program	Increase south campus daily maximum
Increase transportation fee		Introduce park and ride permit		

11. Appendix

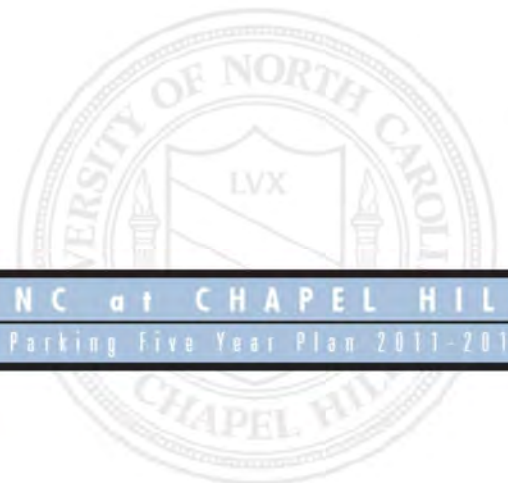


Table 11.1 – Static Revenue versus Expense

Revenue ¹⁶	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Permits-net	\$ 11,276,942	\$ 11,374,689	\$ 11,374,689	\$ 11,374,689	\$ 11,374,689	\$ 11,374,689
Patient/Visitor Parking	\$ 5,009,532	\$ 5,022,056	\$ 5,034,611	\$ 5,047,197	\$ 5,059,815	\$ 5,072,465
Departmental Transit	\$ 3,161,173	\$ 3,169,076	\$ 3,176,999	\$ 3,184,941	\$ 3,192,904	\$ 3,200,886
Student Transit-CHT	\$ 1,936,458	\$ 1,943,844	\$ 1,950,099	\$ 1,954,624	\$ 1,958,483	\$ 1,959,481
Student Transit Bus/Van Replacement	\$ 121,193	\$ 121,656	\$ 122,047	\$ 122,330	\$ 122,572	\$ 122,634
Debt Supplement ¹⁷	\$ 539,315	\$ 541,381	\$ 539,223	\$ 540,000	\$ 540,000	\$ 540,000
Citations-net	\$ 160,000	\$ 160,800	\$ 161,604	\$ 162,412	\$ 163,224	\$ 164,040
Investment Income	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000
All Other Revenue	\$ 135,000	\$ 135,000	\$ 135,000	\$ 135,000	\$ 135,000	\$ 135,000
Total Revenue	\$ 22,499,613	\$ 22,628,501	\$ 22,654,272	\$ 22,681,194	\$ 22,706,687	\$ 22,729,196
Expense ¹⁵	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Salaries/Wages	\$ 3,566,144	\$ 3,673,129	\$ 3,783,322	\$ 3,896,822	\$ 4,013,727	\$ 4,134,139
Benefits	\$ 1,059,747	\$ 1,091,539	\$ 1,124,285	\$ 1,158,014	\$ 1,192,754	\$ 1,228,537
Supplies	\$ 606,179	\$ 618,303	\$ 630,669	\$ 643,282	\$ 656,148	\$ 669,271
Utilities	\$ 667,735	\$ 687,767	\$ 708,400	\$ 729,652	\$ 751,542	\$ 774,088
Repair/Maintenance	\$ 1,273,050	\$ 1,311,242	\$ 1,350,579	\$ 1,391,096	\$ 1,432,829	\$ 1,475,814
Security	\$ 1,379,296	\$ 1,420,675	\$ 1,463,295	\$ 1,507,194	\$ 1,552,410	\$ 1,598,982
Other Operating Costs	\$ 1,426,077	\$ 1,468,859	\$ 1,512,925	\$ 1,558,313	\$ 1,605,062	\$ 1,653,214
UNC Admin Charges	\$ 514,991	\$ 530,441	\$ 546,354	\$ 562,745	\$ 579,627	\$ 597,016
Chapel Hill Transit	\$ 5,930,168	\$ 5,930,168	\$ 5,930,168	\$ 5,930,168	\$ 5,930,168	\$ 5,930,168
Regional Transit	\$ 387,000	\$ 387,000	\$ 387,000	\$ 387,000	\$ 387,000	\$ 387,000
Debt Expense, ¹⁸	\$ 5,090,915	\$ 5,073,971	\$ 5,038,616	\$ 5,026,407	\$ 5,004,336	\$ 4,987,161
Parking Fund Balance ¹⁹	-	\$ (438,000)	\$ (438,000)	\$ (438,000)	\$ (438,000)	\$ (438,000)
Transfer to P2P	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
Capital Repair	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 350,000	\$ 250,000
Total Expense	\$ 22,651,302	\$ 22,505,093	\$ 22,787,613	\$ 23,102,693	\$ 23,267,602	\$ 23,497,389
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Revenue less Expense	\$ (151,689)	\$ 123,409	\$ (133,342)	\$ (421,499)	\$ (560,915)	\$ (768,193)

¹⁶ Assumes no changes in revenue or expense, with the exception of minor annual inflation and estimated increases to student and faculty population.

¹⁷ Debt Supplement source is UNC Treasury.

¹⁸ Assumes Belltower debt to Department of Public Safety is \$3 million.

¹⁹ Use \$6 million from Parking Fund Balance to pay debt, resulting in an annual expense savings of \$438k/yr.

Table 11.2 – Projected Increased Expenses, Efficiencies, and Funding Strategies

Major Expense Obligations	2011/12	2012/13	2013/14	2014/15	2015/16
Chapel Hill Transit	\$ (313,464)	\$ (957,246)	\$ (1,448,505)	\$ (1,996,960)	\$ (2,635,982)
Regional Transit	\$ (43,710)	\$ (92,581)	\$ (147,625)	\$ (208,854)	\$ (270,280)
Craige Deck Expansion ²⁰	-	-	\$ (505,573)	\$ (2,059,951)	\$ (2,073,613)
Patient/Visitor Deck ²¹	-	-	-	\$ (62,075)	\$ (756,475)
Total Major Expense Obligations	\$ (357,174)	\$ (1,049,827)	\$ (2,101,703)	\$ (4,327,840)	\$ (5,736,350)

Financial Efficiencies	2011/12	2012/13	2013/14	2014/15	2015/16
Remote Cashiering	\$ 123,951	\$ 176,745	\$ 179,624	\$ 182,588	\$ 185,642
LED Lighting ²²	\$ (200,309)	\$ (200,309)	\$ (29,302)	\$ 245,145	\$ 249,778
Meter Pay Stations	\$ (62,000)	\$ 37,600	\$ 37,600	\$ 37,600	\$ 37,600
LPR	\$ (140,817)	\$ (140,817)	\$ (140,817)	\$ 136,500	\$ 136,500
Total Financial Efficiencies	\$ (279,174)	\$ (126,780)	\$ 47,106	\$ 601,833	\$ 609,520

Funding Strategies	2011/12	2012/13	2013/14	2014/15	2015/16
Permit Increase ²³	\$ 0	\$ 0	\$ 227,494	\$ 459,537	\$ 696,222
Depart. Transportation Fee ²⁴	\$ 169,435	\$ 502,602	\$ 765,373	\$ 1,058,631	\$ 1,395,546
Student Transit Fee ²⁵	\$ 272,611	\$ 612,012	\$ 1,083,312	\$ 1,555,580	\$ 2,023,903
Belltower Visitor Surface Lot	\$ 37,500	\$ 37,594	\$ 37,688	\$ 37,782	\$ 37,876
South Campus Hourly Max	-	-	-	-	\$ 214,000
Increased Visitor Hours ²⁶	-	-	-	\$ 153,015	\$ 153,398
Employee Night Permit ²⁷	-	-	-	\$ 318,300	\$ 324,666
Student Night Parking Fee ²⁸	-	-	-	\$ 264,888	\$ 265,023
Park & Ride Permit ²⁹	-	-	\$ 580,750	\$ 592,365	\$ 604,212
Total Funding Strategies	\$ 479,546	\$ 1,152,207	\$ 2,694,616	\$ 4,440,098	\$ 5,714,846

²⁰ Assumes 990-space expansion to Craige Deck.

²¹ Assumes 430-space parking deck.

²² Assumes replacing LED lighting in 2 or 3 parking decks per year.

²³ 2% permit increase starting in year 2013/14.

²⁴ Held at 48.1% transit costs. Average increase of 9% per year.

²⁵ Varies from \$6.35 to \$17.50/year with an average increase of \$14.57 per year.

²⁶ Standardize hours of operation in Highway 54, Swain, Morehead, ACC, and Hospital lots.

²⁷ \$250/year Night Parking Permit (Sliding Scale)

²⁸ \$9/year Student Night Parking Fee – Changed to \$10.40 when fee removed

²⁹ \$250/year Park and Ride Permit Sliding Scale

Table 11.3 – Summarized Financial Projections

	2011/12	2012/13	2013/14	2014/15	2015/16
"Static" Rev less Exp (11.1)	\$ 123,409	\$ (133,342)	\$ (421,499)	\$ (560,915)	\$ (768,193)
Major Expense Obligations (11.2)	\$ (357,174)	\$ (1,049,827)	\$ (2,101,703)	\$ (4,327,840)	\$ (5,736,350)
Financial Efficiencies (11.2)	\$ (279,174)	\$ (126,780)	\$ 47,106	\$ 601,833	\$ 609,520
Funding Strategies (11.2)	\$ 479,546	\$ 1,152,207	\$ 2,694,616	\$ 4,440,098	\$ 5,714,846
Net Financial Projection	\$ (33,393)	\$ (157,742)	\$ 218,520	\$ 153,176	\$ (180,176)



Table 11.4 – Calculation of Local Transit Costs

Route Designation	Annual Boardings	Daily Ridership ³⁰
A	251,754	663
CL	53,151	140
CM	122,770	323
CW	152,986	403
D	389,329	1,025
DX	37,623	99
F	297,442	783
G	240,112	632
HS	54,902	144
J	1,185,508	3,120
N	138,279	364
NU	225,064	592
RU	373,313	982
T	254,735	670
U	431,235	1,135
V	200,958	529
Total	4,409,161	11,604

Cost	
Cost of Service ³¹	\$ 2,643,755
U Route ³²	\$ 460,724
RU Route ³	\$ 416,757
<i>Total Cost</i>	<i>\$ 3,521,236</i>
Less CMAQ Grant ³³	(\$ 61,860)
<i>Revised Total Cost</i>	<i>\$ 3,459,376</i>
Cost Per Person	\$ 298

³⁰ Daily Ridership = Annual Boardings/ (2 x 190), assuming one person travels two directions, 190 times per year

³¹ Cost of service calculated for Agreement for 2009/10 between Chapel Hill Transit and UNC (\$6,832,531 x 38.69%)

³² The U and RU routes are considered allocated routes per the agreement and billed separately. It is assumed that these routes function as Local Transit routes and their cost and ridership data should be included in the Local Transit Calculation

³³ Allocation of CMAQ grant over local and Express Routes: \$101,666 / \$5,787,084 = 1.76%

Table 11.5 – Calculation of Express Transit Costs

Park and Ride Lot	Lot Capacity	Oversell Capacity ³⁴	Route	Cost	Per Person Cost ³⁵	Ridership	Per Person Transit Cost ³⁶
Carrboro Plaza	145	196	CX	\$158,461	\$810	151,069	\$480
Friday Center	871	1176	FCX	\$471,284	\$401	357,273	\$604
Hedrick Building	278	375	HU	\$420,437	\$1,120	352,325	\$547
Jones Ferry	443	598	JFX	\$219,781	\$367	180,825	\$557
Southern Village/Eubanks	400	540	NS X	\$125,979	\$233	646,718	\$89
Chatham County	550	550	ChathamX	\$490,712	\$892	156,730	\$1,434
Hwy NC 54	512	691	S Route	\$250,000	\$362	247,000	\$464
Tripper				\$129,194			
Total	3,199	4,126	-	\$2,265,848	\$549	2,091,940	\$496

Total Cost of Service	\$ 2,265,848
Less CMAQ Grant ³⁷	(\$ 39,806)
Revised Net Cost	\$2,226,042
Cost Per Person	\$488

³⁴ Assumes 35% Oversell

³⁵ Per Person Cost = Cost / Oversell Capacity

³⁶ Assumes one person travel two directions, 229 times per year

³⁷ Allocation of CMAQ grant over local and Express Routes: \$101,666 // \$5,787,084 = 1.76%