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North Carolina Central University

Parking Financial Review

September 20, 2017



Parking Financial Review

North Carolina Central University
Durham, NC

Prepared for North Carolina Central University
September 20, 2017

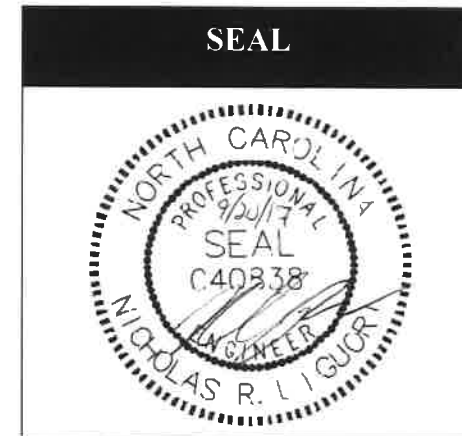
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Parking Financial Review

Prepared for North Carolina Central University

September 20, 2017

Executive Summary

A parking financial review has been performed for North Carolina Central University (NCCU). The objective of this study was to review University parking operations from a financial perspective and to give recommendations which will improve both the operations and cost effectiveness of parking on campus.

Table A on the following page summarizes the recommendations related to parking over the next ten (10) years. The short term recommendations (2017 to 2021) seek to more efficiently utilize existing parking resources, in order to delay the need for parking expansion projects. These include modifying faculty / staff parking to a zone system, shifting parking spaces from staff to student parking, and incentives to increase utilization of the Latham Deck. Additional recommendations are given to improve the cost-effectiveness of parking, especially where parking spaces are currently sold below their market value. These strategies include increasing permit prices for some parking types (reserved staff parking and surface student parking), reduction in the number of reserved spaces, and installing metered parking at highly convenient parking locations. Additionally, it is recommended to coordinate with the City of Durham to prohibit non-residential parking on residential streets adjacent to campus. There is a pattern of students parking on these streets as free parking and as an alternative to purchasing a parking permit. The occupancy counts indicate there is spare capacity to accommodate this demand, particularly at the Latham Deck. Short Term (5 year) recommendations are also shown in Exhibit A.

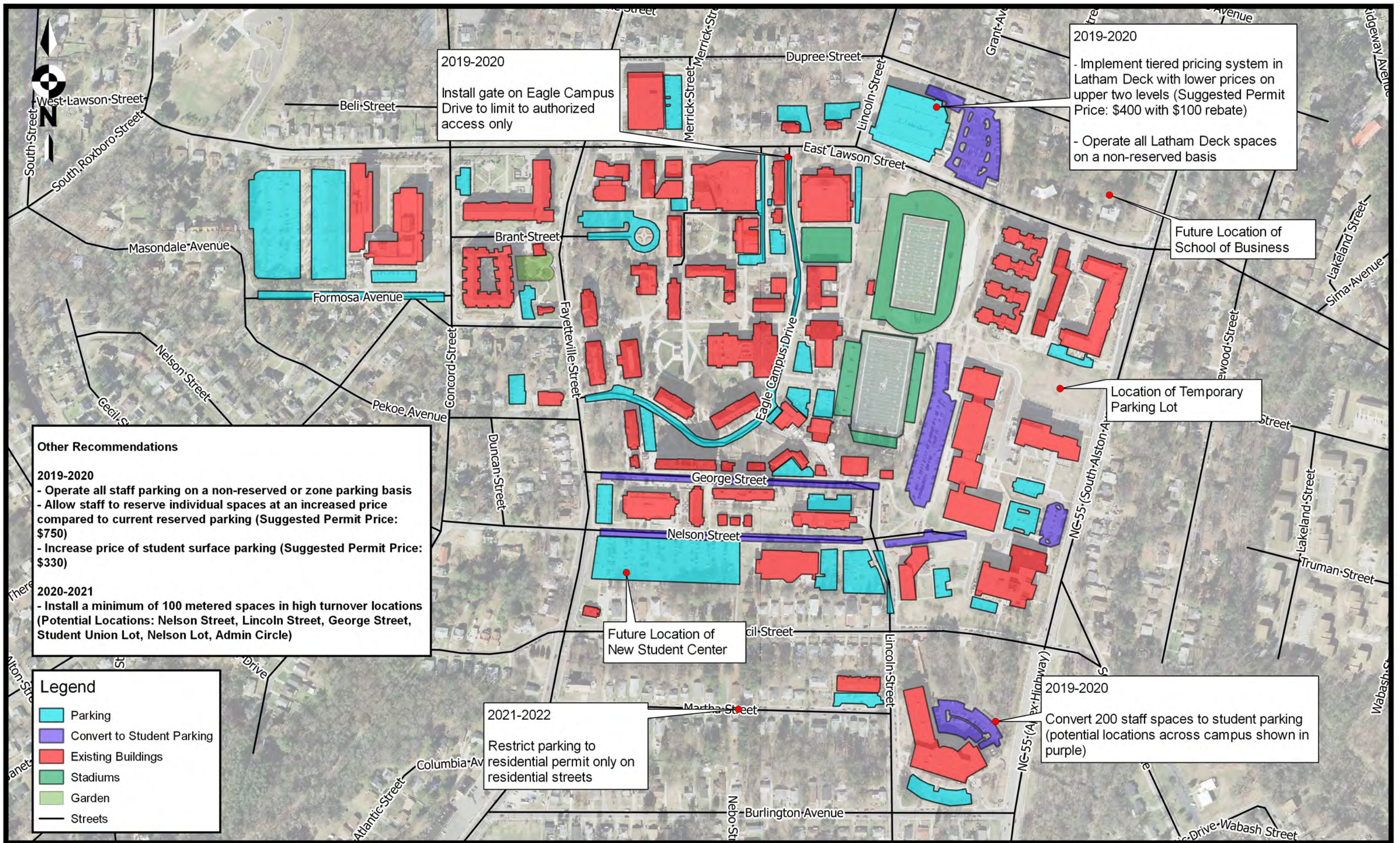
In the long term (2022 to 2026), recommendations are made to increase parking supply to keep pace with campus population growth. Specifically, park and ride was selected as a more cost-effective option than alternatives such as new parking decks or on-campus surface lots. It is recommended to open a park and ride lot with 120 spaces once the temporary lot to be built between Childley Hall and the Nursing School is eliminated. This temporary lot will serve to offset parking lost during the construction period of the Student Center. It will also be necessary to ensure adequate park and ride accommodations, including shuttle capacity and frequency, security, lot cleaning, and lighting. In year 2025, it is recommended to expand park and ride capacity by an additional 120 spaces (240 total), or as needed based on future population and/or parking data. Long Term (10 year) recommendations are also shown in Exhibit B.

Finally, through discussions with University staff, it is recommended to consider shifting the management of parking from the University Police Department to the Transportation Department. At many universities, parking is either managed by the transportation department (e.g., NC State University) or is a stand-alone department (e.g., UNCG and NC A&T).

In conclusion, the recommendations identified in this study are expected to improve both the operations and cost-effectiveness of the University's parking. The projections shown in Table 4.6 of the report indicate that these recommendations can accomplish a significant increase in parking revenue.

Table A – Recommendations Summary

Academic Year	Recommendations
2019-2020	<ul style="list-style-type: none"> • Operate all staff parking on a non-reserved or zone parking basis, which will allow increased permit sales and higher utilization of staff parking • Allow staff to reserve individual spaces, but at an increased price compared to current reserved parking. This rate increase reflects the convenience of this parking and the cost of reserving spaces. Suggested permit price: \$750 (\$175 increase). • Convert 200 existing staff parking spaces to student parking in order to relieve demand for additional student parking. Suggested locations: Criminal Justice Nelson Street Lot, George Street, Latham Surface Lot, Law School Upper Lot, Nelson Street, O'Kelly Riddick, and School of Education Front Lot. • Increase price of student surface parking (currently \$300) to reflect convenience of this parking. Suggested permit price: \$330 (\$30 increase). • Implement tiered pricing system in Latham Deck with lower prices on upper two (2) levels in order to incentivize and increase utilization. Suggested permit price: \$400 with \$100 meals/books rebate (\$75 decrease). • Operate all Latham Deck spaces on a non-reserved basis • Install gates on Eagle Campus Drive and limit this street to authorized access only
2020-2021	<ul style="list-style-type: none"> • Install a minimum of 100 new metered parking spaces, especially at highly convenient parking areas with high turnover. Suggested locations: Nelson, Lincoln, and George Streets, Student Union Lot, Admin Circle, and portions of new Student Center lot.
2021-2022	<ul style="list-style-type: none"> • Coordinate with City of Durham to restrict parking to residential permit parking only on residential streets adjacent to campus which currently allow 2 hour parking
2022-2023	<ul style="list-style-type: none"> • Implement a park and ride lot with shuttle service to and from the University, and with a capacity of at least 120 parking spaces. This should be implemented once temporary lot is eliminated. • Ensure adequate park and ride accommodations, including shuttle capacity and frequency, security, lot cleaning, and lighting
2023-2024	<ul style="list-style-type: none"> • No additional recommendations
2024-2025	<ul style="list-style-type: none"> • No additional recommendations
2025-2026	<ul style="list-style-type: none"> • Expand park and ride capacity by an additional 120 parking spaces (240 total), or adjust as needed based on future parking-related data
2026-2027	<ul style="list-style-type: none"> • No additional recommendations



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Parking Financial Review

Prepared for North Carolina Central University
September 20, 2017

1.0 Introduction

A parking financial review has been performed for North Carolina Central University (NCCU). The objective of this study was to review University parking operations from a financial perspective and to give recommendations which will improve both the operations and cost effectiveness of parking on campus.

In January 2017, DAVENPORT completed a Parking Plan which outlined recommendations to accommodate future parking demands over the next four years. At this time, the University requested a more detailed review of parking operations from a financial perspective, in order to improve the efficiency of the parking program. This is consistent with the University's goal to make the parking program self-sustaining financially and capable of funding future parking projects. This study identifies parking strategies and improvements to help reach this goal.

This study was completed through coordination with University staff from several departments, who provided information and valuable input throughout the process. These included staff members in Capital Projects Management, Transportation, University Police, and Administration and Finance departments. Parking operations are managed by the University Police department.



2.0 Historical Financial Analysis

A financial analysis was performed for the University's parking program, based on financial data provided by the University. This section provides a breakdown of parking-related expenses and revenues for the previous three (3) academic years. This was used to provide overall perspective, to calibrate projections of future expenses and revenues, and in developing improvement strategies. Parking-related expenses and revenues are managed by the University Police department.

2.1 Past Expenses

The financial data provided by the University for the past three (3) years is summarized in Table 2.1. Overall, expenses were classified into the following categories: operating expenses, maintenance costs, special events, and debt servicing. Operating expenses include salaries and labor costs for all day-to-day parking operations, including parking enforcement, as well as material costs related to parking operations. Maintenance costs include all costs related to repair and regular maintenance of the parking areas, including surface, on-street, and structured (Latham Deck) parking facilities. Special events costs include all labor and material costs related to special events, such as football and basketball games, and conferences. Debt servicing includes payments towards the remaining debt on the Latham Parking Deck.

The parking program's annual expenses totaled approximately \$1,530,000 in the 2016-2017 school year. It can be seen that the largest single line item is debt servicing payments on the Latham Deck.

Table 2.1 - Past Parking Expenses			
	2014-2015	2015-2016	2016-2017
Operating Expenses			
Labor	\$264,333	\$271,769	\$283,562
Materials	\$39,332	\$19,506	\$61,297
Total Operating Expenses	\$303,665	\$291,275	\$344,859
Maintenance Costs			
Latham deck maintenance	\$2,135	\$34,468	\$33,827
Total maintenance costs	\$2,135	\$34,468	\$33,827
Special Events			
Special events parking enforcement costs	\$21,853	\$33,213	\$25,623
Total special events Costs	\$21,853	\$33,213	\$25,623
Debt Servicing			
Latham deck debt payments	\$1,124,800	\$1,123,600	\$1,126,175
Total debt servicing	\$1,124,800	\$1,123,600	\$1,126,175
Total Expenses	\$1,452,453	\$1,482,556	\$1,530,484

2.2 Past Revenue

The University also provided parking revenue data for years 2014 through 2016. Revenue was classified into the following categories: 1) permit sales, 2) hourly parking revenue, 3) special events revenue, 4) revenue from fines, and 5) other revenue and reimbursements. Permit sales was further broken down into Latham Deck and surface parking revenue. Hourly parking refers to the bottom level of the Latham Deck, a 40-space section which operates as hourly parking (\$4 for up to 4 hours, \$8 for up to 8 hours). Special events revenue is generated at conferences, banquets, and other events excluding sporting events. Sporting events revenue is currently received by the Athletics Department and was therefore excluded from this fund. For fines occurring on campus, NCCU receives 14.27% of revenue. This information is summarized in Table 2.2

Table 2.2 - Past Parking Revenue			
	2014-2015	2015-2016	2016-2017
Permit Sales			
Latham Deck total	\$254,293	\$346,262	\$326,912
Surface parking total	\$1,019,019	\$952,183	\$977,362
Total permit sales revenue	\$1,306,313	\$1,302,054	\$1,336,950
Hourly Parking			
Latham Deck hourly parking	\$53,001	\$23,609	\$52,676
Total hourly parking revenue	\$53,001	\$23,609	\$52,676
Special Events Revenue	\$375	\$1,450	\$1,720
Fine Revenue	\$123,014	\$138,059	\$155,457
Other Revenue and Reimbursements	\$64,044	\$16,239	\$1,225
Total parking revenue	\$1,513,746	\$1,477,802	\$1,515,352

The total revenue for the 2016-2017 academic year was approximately \$1,515,000. This is approximately \$15,000 less than total expenses for the same year. Also, this level of revenue is insufficient to fund future parking expenses which must be planned for, such as new construction or deck maintenance projects. It should also be noted that the University currently in effect subsidizes the parking program through rebates on Latham Deck permits and fine revenue. Improving the financial standing of the parking program will improve the University's ability to fund other projects.

3.0 Background Information

This section presents background information which was considered in the development of recommendations.

3.1 Permit Rates Comparison

In order to provide a gauge of parking pricing, current permit prices were compared with three (3) other universities in the region: NC State University in Raleigh, NC A&T State University in Greensboro, and UNCG in Greensboro. These universities were selected based on similar locations and/or size. The permit rates for all the universities are summarized in Table 3.1 below.

At NCCU, annual rates for staff parking are \$475 for non-reserved parking and \$575 to \$675 for reserved spaces. Annual rates for student parking are \$300, both for commuter and resident student parking. At the Latham Deck, permits are \$475 for students, with a \$100 rebate toward books or meals. Staff parking in the Latham Deck is \$475 for a non-reserved permit, or \$575 for a reserved space.

It can be seen from Table 3.1 below that NCCU parking rates are higher than NC A&T State University in Greensboro for both students and staff. However, NCCU's rates are lower than UNCG, both for surface and deck parking. NCCU's staff parking prices are higher than at UNCG. It should be noted that UNCG and NC A&T are both in Greensboro. NC State University in Raleigh has overall higher parking rates than the universities in Greensboro, with the exception of deck parking. Reserved parking at NC State is \$1215, compared with \$575 to \$675 at NCCU. Student parking at NC State is generally higher as well: ranging from \$275 to \$370, compared with \$300 at NCCU.

Table 3.1 - Parking Permits Price Comparison				
	NCCU (Durham, NC)	UNCG (Greensboro, NC)	NC A&T (Greensboro, NC)	NC State (Raleigh, NC)
Student surface parking	\$300	\$333	\$242	\$275-\$370
Staff surface parking	\$475 (general) \$575 (reserved) \$675 (premium reserved)	\$333	\$278 (general) to \$550 (reserved)	\$357 (general), \$1215 (reserved)
Deck parking	\$475 (student reserved)* \$475 (staff non-reserved) \$575 (staff reserved)	\$490	\$242 (student), \$325 (staff), \$400 (reserved staff)	\$325-\$390
Remote lots	N/A	\$193 (remote / evening permit)	\$125 (student), \$150 (staff)	\$120
Evening	\$80		\$124 (student), \$144 (staff)	\$66
Summer	\$75 (students), \$120 (staff)	\$64 (surface), \$106 (deck)	\$50	\$80
* Students receive a \$100 rebate toward books or meals with the purchase of a Latham Deck permit				

3.2 Parking Demand and Utilization

In January 2017, DAVENPORT completed a Parking Plan for the University. This included occupancy counts for all NCCU-maintained parking inventory, which were performed on Wednesday, August 24th, 2016. These results are represented in Table 3.2 below as a consideration for the current study and recommendations.

The key observation from this data is that while student parking is heavily occupied—99% utilized at peak—there is significant spare capacity in reserved staff parking areas and in the Latham Deck. Even at peak demand, there were 269 unoccupied spaces in reserved staff parking, and 257 unoccupied spaces in the Latham Deck. This is a total of 526 empty spaces that could be used to meet excess student parking demand.

Table 3.2 - Parking Occupancy Counts Results (Wednesday, August 24, 2016)												
Parking Type or Restriction	Capacity	Utilization Rates										
		8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	Max
Reserved Staff	792	26%	46%	57%	63%	64%	65%	66%	65%	65%	55%	66%
Latham Deck	686	39%	53%	61%	62%	63%	59%	57%	56%	54%	46%	63%
Non-reserved Staff	181	56%	78%	86%	89%	85%	88%	86%	76%	78%	66%	89%
Student	892	63%	90%	99%	99%	97%	92%	90%	80%	77%	74%	99%
Visitor	27	11%	7%	37%	41%	52%	41%	44%	33%	37%	22%	52%
Handicapped	132	17%	30%	33%	47%	43%	45%	44%	32%	40%	36%	47%
Specialized	20	10%	5%	25%	35%	30%	25%	50%	35%	35%	35%	50%
Total Campus	2730	43%	63%	72%	75%	75%	72%	72%	66%	65%	58%	75%
Utilization of 90% or greater (effective capacity) highlighted in blue												

3.3 Planned Construction

There are three (3) main construction projects planned at the University in the study period, which will have an impact on parking:

1. A **new Student Center** is planned to be built on the current Nelson lot and extending south toward Cecil Street. This building will have approximately 100,000 square feet of floor space, including a large multi-use gathering space with a capacity of 1,000 for conferences and banquets. The Student Center will also have an auditorium with 1,750 seats to accommodate the full freshman class. The new Student Center will replace the current Alphonso Elder Student Union, which will be used for classroom and / or office functions. A majority of the Nelson Street surface lot as well as Nelson on-street parking will be eliminated as a result of this construction. This will partially be recovered by an adjacent surface lot which will open after construction is complete. Construction is expected to begin in 2018, and the building is expected to open in Fall 2021.
2. A **new School of Business** (approximately 86,200 square feet) is planned to be built on the north side of East Lawson Street between the Latham surface lot and Alston Avenue. A new surface parking area is also planned on this site. Construction is expected to begin in 2019, with an opening date of Fall 2021.
3. A **temporary parking lot** is planned for the empty lot between the Nursing School and Chidley Hall. The main purpose of this lot is to offset lost parking during the construction period of the new Student Center. Therefore, this lot is planned to be in place in Fall 2018. This temporary lot will have approximately 120 spaces, and is planned to be removed within approximately one (1) year after the Student Center and its parking areas are opened.

4.0 Projections and Recommendations

This section outlines the recommendations we have identified through coordination with University staff. Recommendations are divided into categories of short term (first five years) and long term (five to ten years). These recommendations aim to more efficiently utilize the existing parking supply, which in turn can delay the need for expensive parking expansion projects. Also, recommendations are made to ensure that parking is priced appropriately. Projections of future expenses and revenues are also included, which provide a planning-level measurement of the expected impact of these recommendations.

4.1 Short Term (5 Year) Findings and Recommendations

This section presents the parking recommendations for the short term (5 year) scenario. These recommendations are summarized in Table 4.1 and are discussed in more detail below. Figure 1 provides a visual summary of these recommendations. Projected expenses and revenue for the next four (4) years are outlined in Tables 4.2 and 4.3, respectively.

Table 4.1 –Short Term (5 Year) Recommendations Summary	
Academic Year	Recommendations
2019-2020	<ul style="list-style-type: none"> • Operate all staff parking on a non-reserved or zone parking basis, which will allow increased permit sales and higher utilization of staff parking • Allow staff to reserve individual spaces, but at an increased price compared to current reserved parking. This rate increase reflects the convenience of this parking and the cost of reserving spaces. Suggested permit price: \$750 (\$175 increase). • Convert 200 existing staff parking spaces to student parking in order to relieve demand for additional student parking. Suggested locations: Criminal Justice Nelson Street Lot, George Street, Latham Surface Lot, Law School Upper Lot, Nelson Street, O'Kelly Riddick, and School of Education Front Lot. • Increase price of student surface parking (currently \$300) to reflect convenience of this parking. Suggested permit price: \$330 (\$30 increase). • Implement tiered pricing system in Latham Deck with lower prices on upper two (2) levels in order to incentivize and increase utilization. Suggested permit price: \$400 with \$100 meals/books rebate (\$75 decrease). • Operate all Latham Deck spaces on a non-reserved basis • Install gates on Eagle Campus Drive and limit this street to authorized access only
2020-2021	<ul style="list-style-type: none"> • Install a minimum of 100 new metered parking spaces, especially at highly convenient parking areas with high turnover. Suggested locations: Nelson, Lincoln, and George Streets, Student Union Lot, Admin Circle, and portions of new Student Center lot.
2021-2022	<ul style="list-style-type: none"> • Coordinate with City of Durham to restrict parking to residential permit parking only on residential streets adjacent to campus which currently allow 2 hour parking

Reserved Parking

Our parking occupancy counts and observations indicate that the campus' parking issues are not the result of a lack of capacity, but rather the result of poor utilization. Student parking demand exceeds capacity, with 99% peak utilization. However, reserved staff parking and the Latham Deck have significant spare capacity, with 526 empty spaces at peak hour in these areas alone. This demonstrates that parking expansion projects are not needed at this time. Rather, there is a need to more efficiently utilize existing reserved staff parking and the Latham Deck to absorb excess student parking demand.

An optimum parking configuration is one in which each parking space can be reused by multiple vehicles over the course of a day. This takes advantage of the fact that different users require parking for different hours, based on differing weekly schedules. As a result, a single parking space can potentially serve one vehicle in the morning, another vehicle at midday, another vehicle in the afternoon, and so on. This reduces the overall parking supply that the University must provide. By contrast, reserved parking limits the University's ability to reuse parking spaces and ultimately results in the need for a greater number of parking spaces.



As a result, we recommend the following related to reserved parking:

- Operate all staff parking on a non-reserved or zone parking basis, which will allow increased permit sales and higher utilization of staff parking
- Allow staff to reserve individual spaces, but at an increased price compared to current reserved parking. Currently, reserved staff parking costs \$575 for typical spaces and \$675 for premium spaces. These rates should be increased to reflect the convenience of this parking and the cost of reserving spaces. The suggested permit price is \$750 (a \$175 increase). This price is still well below NC State University prices (\$1215).
- Convert 200 existing staff parking spaces to student parking in order to relieve demand for additional student parking. Suggested locations: Criminal Justice Nelson Street Lot, George Street, Latham Surface Lot, Law School Upper Lot, Nelson Street, O'Kelly Riddick, and School of Education Front Lot.

Student Parking and Latham Deck

Student surface parking is currently priced at \$300 annually. This is significantly below the price at the Latham Deck, which is \$475 with a \$100 rebate toward books or meals (effective price \$375). Observed demand levels indicate that student surface parking is underpriced relative to its value and convenience, and relative to the price of parking in the Latham Deck. Therefore, we recommend increasing the price of surface student parking. The suggested permit price is \$330 (a \$30 increase). This rate is comparable to UNCG and NC State University prices.

The University should incentivize parking in the Latham Deck, especially the upper levels, which are typically less utilized than the lower levels. Specifically, a tiered pricing system is recommended at the Latham Deck, with lower permit prices on the upper two (2) levels. The suggested permit price is \$400. With the \$100 rebate for means and books, the effective price decreases from \$375 to \$300. This incentive applies to student parking only. Staff prices in the Deck should not be reduced, to avoid an excessive shifting of staff parking from surface lots to the Deck. Additionally, it is recommended to operate all Latham Deck parking on a non-reserved basis. The sale of reserved parking permits in the Deck is not cost-effective and contributes to under-utilization of these spaces.

Hourly Parking

The only hourly or metered parking that the University currently operates is the bottom level of the Latham Deck, an area consisting of 40 spaces. Metered parking is ideal at highly convenient parking areas with high turnover. Metered parking allows the University to capitalize on the inherent value of these parking areas due to their convenience. We recommend expanding the amount of metered parking on campus by a minimum of 100 new spaces. Suggested locations for metered parking include Nelson, Lincoln, and George Streets, Student Union Lot, Admin Circle, and portions of the new Student Center lot.

On-street parking on residential streets near campus currently has a two (2) hour parking limit except by residential permit. Observations indicate these streets are heavily utilized by students as free parking and as an alternative to purchasing a parking permit. This contributes to the under-utilization of the Latham Deck, and is also a burden on the residential streets and their residents. We recommend coordinating with the City of Durham to prohibit non-residential parking on these streets. This is expected to increase utilization of on-campus parking. The occupancy counts indicate there is spare capacity to accommodate this demand.

Eagle Campus Drive

Eagle Campus Drive is an internal loop road which travels through the core of campus. There is on-street parking on this street which is reserved for faculty and staff only. University staff have indicated that this loop road experiences congestion due to students using this street for drop-offs and pick-ups, illegal parking, and as a cut-through street. The University envisions for this street to be used only by faculty and authorized service vehicles, and this street does not connect to any student parking lots. Also, there is a need to limit traffic volumes on this road due to the high pedestrian volumes present. It is recommended that the University install gates on Eagle Campus Drive and limit this street to authorized access only.

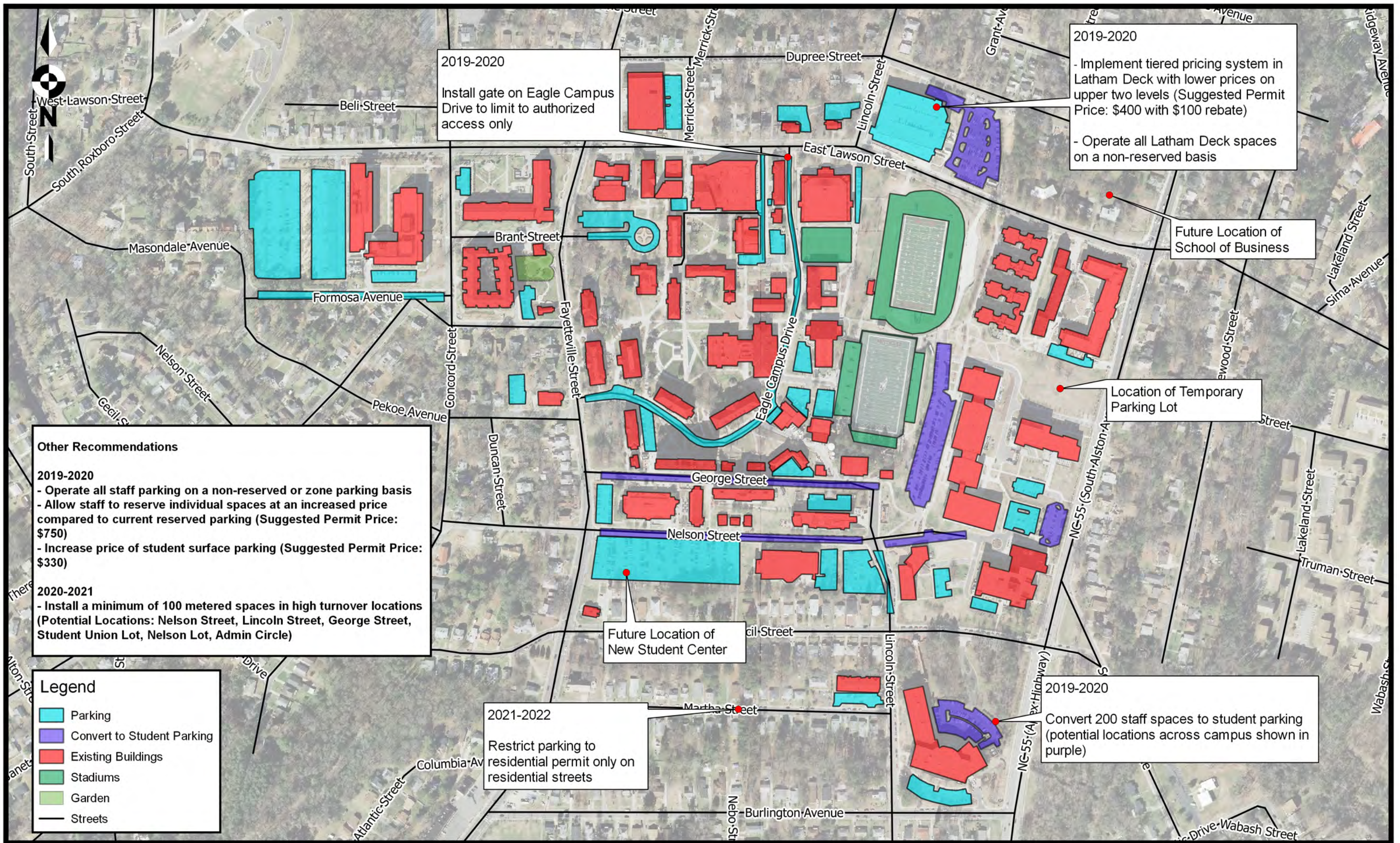


Figure 1
Parking Recommendations Summary (5 years)

4.2 Short Term (5 Year) Revenue and Expense Projections

Based on the financial data provided and the proposed recommendations, planning-level projections of parking expenses and revenue are provided in Tables 4.2 and 4.3, respectively. These projections indicate that an increase in revenue of approximately \$400,000 can be accomplished with these recommendations. This is the result of more efficient utilization of existing parking spaces, permit price increases where appropriate, new metered parking, and changes to on-street parking at the perimeter of campus. In addition to the financial benefits, these recommendations are expected to resolve student parking capacity issues, and thereby delay the need for parking expansion projects in the short term. Figure 2 illustrates projected parking revenue and expenses through academic year 2021-2022.

Table 4.2 - Projected Parking Expenses (Short Term)

	<i>Historical</i>			<i>Projections</i>				
	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Operating Expenses								
Labor	\$264,333	\$271,769	\$283,562	\$289,200	\$295,000	\$370,900	\$378,300	\$385,900
Materials	\$39,332	\$19,506	\$61,297	\$40,800	\$41,600	\$42,400	\$43,200	\$44,100
Metered parking costs	-	-	-	-	-	-	\$27,000	\$27,000
Total Operating Expenses	\$303,665	\$291,275	\$344,859	\$330,000	\$336,600	\$413,300	\$421,500	\$430,000
Maintenance Costs								
Latham deck maintenance	\$2,135	\$34,468	\$33,827	\$23,900	\$24,400	\$24,900	\$25,400	\$25,900
Total maintenance costs	\$2,135	\$34,468	\$33,827	\$23,900	\$24,400	\$24,900	\$25,400	\$25,900
Special Events								
Special events parking enforcement costs	\$21,853	\$33,213	\$25,623	\$27,400	\$27,900	\$28,500	\$29,100	\$29,700
Total special events costs	\$21,853	\$33,213	\$25,623	\$27,400	\$27,900	\$28,500	\$29,100	\$29,700
Debt Servicing	\$1,124,800	\$1,123,600	\$1,126,175	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900
Total Expenses	\$1,452,453	\$1,482,556	\$1,530,484	\$1,506,200	\$1,513,800	\$1,591,600	\$1,600,900	\$1,610,500
Notes: 1) Projections assume 2% inflation of costs per year 2) Costs of new temporary lot construction and gate installation on Eagle Campus Drive are excluded 3) Labor costs assume the addition of a parking coordinator with \$70,000 salary in 2019 2020 4) Materials, maintenance, and special events costs are based on historical averages 5) Metered parking costs are based on per-transaction costs obtained from Passport Parking								

Table 4.3 - Projected Parking Revenue (Short Term)

	<i>Historical</i>			<i>Projections</i>				
	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Permit Sales								
Latham Deck total	\$254,293	\$346,262	\$326,912	\$330,200	\$333,500	\$368,300	\$372,000	\$413,900
Surface parking total	\$1,019,019	\$952,183	\$977,362	\$1,001,800	\$1,011,800	\$1,128,900	\$1,140,200	\$1,151,600
Total permit sales revenue	\$1,273,312	\$1,298,445	\$1,304,274	\$1,332,000	\$1,345,300	\$1,497,200	\$1,512,200	\$1,565,500
Hourly Parking								
Latham Deck hourly parking	\$53,001	\$23,609	\$52,676	\$53,200	\$53,700	\$54,300	\$54,800	\$55,400
New metered parking	-	-	-	-	-	-	\$131,700	\$133,000
Total hourly parking revenue	\$53,001	\$23,609	\$52,676	\$53,200	\$53,700	\$54,300	\$186,500	\$188,400
Special Events								
Sports events revenue	-	-	-	-	\$30,000	\$30,300	\$30,600	\$30,900
Other events revenue	\$375	\$1,450	\$1,720	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Total special events revenue	\$375	\$1,450	\$1,720	\$1,200	\$31,200	\$31,500	\$31,800	\$32,100
Fines	\$123,014	\$138,059	\$155,457	\$138,800	\$138,800	\$138,800	\$138,800	\$141,600
Other Revenue and Reimbursements	\$64,044	\$16,239	\$1,225	\$20,400	\$20,400	\$20,400	\$20,400	\$20,400
Total parking revenue	\$1,513,746	\$1,477,802	\$1,515,352	\$1,545,600	\$1,589,400	\$1,742,200	\$1,889,700	\$1,948,000
Total parking expenses	\$1,452,453	\$1,482,556	\$1,530,484	\$1,506,200	\$1,513,800	\$1,591,600	\$1,600,900	\$1,610,500
Revenue less expenses	\$61,293	-\$4,754	-\$15,132	\$39,400	\$75,600	\$150,600	\$288,800	\$337,500
Notes: 1) Projections assume 1% increase in campus population and parking demand per year 2) Metered parking revenue is projected based on historical revenue from Latham Deck hourly spaces 3) Sports events revenue is based on discussions of revenue sharing with Athletics Department 4) Events, fines, and other reimbursements revenue are based on historical averages								

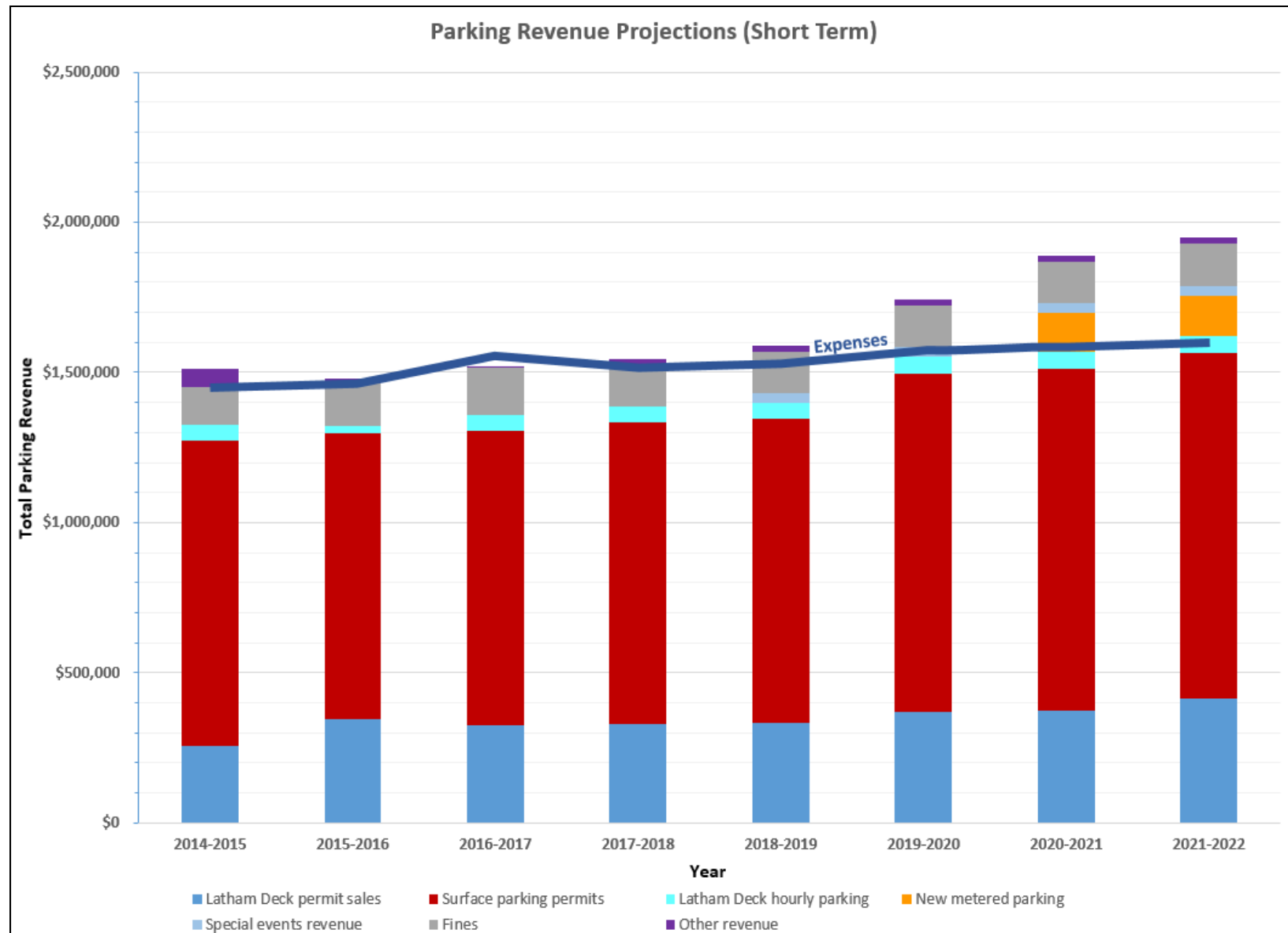


Figure 2 - Parking Revenue Projections through Academic Year 2021-2022

4.3 Long Term (10 Year) Findings and Recommendations

This section presents the parking recommendations for the long term (10 year) scenario. These recommendations are summarized in Table 4.4 below and are discussed in more detail on the following pages. Also, Figure 3 provides a visual summary of all parking recommendations. Projected expenses and revenue for the next ten (10) years are outlined in Tables 4.5 and 4.6, respectively.

Table 4.4 – Long Term (10 Year) Recommended Improvements	
Academic Year	Recommendations
2022-2023	<ul style="list-style-type: none"> Implement a park and ride lot with shuttle service to and from the University, and with a capacity of at least 120 parking spaces. This should be implemented once temporary lot is eliminated. Ensure adequate park and ride accommodations, including shuttle capacity and frequency, security, lot cleaning, and lighting
2023-2024	<ul style="list-style-type: none"> No additional recommendations
2024-2025	<ul style="list-style-type: none"> No additional recommendations
2025-2026	<ul style="list-style-type: none"> Expand park and ride capacity by an additional 120 parking spaces (240 total), or adjust as needed based on future parking-related data
2026-2027	<ul style="list-style-type: none"> No additional recommendations

Park and Ride

Park and ride is an approach increasingly used by universities, in which students and/or staff park at off-site satellite parking lots, and then take shuttles to campus. Due to differences in property values, this type of parking is often significantly less costly than on-campus parking, even when the cost of operating shuttles is considered. Due to the geographic constraints of the NCCU campus, it is envisioned that park and ride will play an increasing role in future parking operations. Park and ride can also calm traffic and reduce traffic volumes near the center of campus, since these lots are located off campus and students reach the campus by shuttles rather than by personal vehicles. This helps to promote a more pedestrian and bicycle-friendly campus by reducing the number of vehicles near the center of campus.

The temporary parking lot with approximately 120 spaces is planned to be built on the empty lot between the Nursing School and Chidley Hall. This temporary parking lot will be opened in Fall 2018, when the Student Center begins construction, to offset parking losses during this construction period. Lost parking will partially be recovered when the Student Center and its parking areas open in Fall 2021, and then the University plans to eliminate the temporary lot within one (1) year. Once the temporary lot is eliminated, it is recommended to open a park and ride lot with equivalent capacity (120 spaces). It may be possible to lease these parking spaces from a nearby church parking lot or other site with low weekday parking utilization.

It will also be necessary to ensure adequate park and ride accommodations, including shuttle capacity and frequency, security, lot cleaning, and lighting. The headway or frequency of shuttles should be 10 to 15 minutes during peak times, and 15 to 30 minutes during off peak times. The frequency of shuttles will directly affect convenience, and thus will affect how much students are willing to pay for park and ride permits. Park and ride should be significantly less costly (50% or less) than on-campus permits in order to incentivize its use.

In year 2025, it is recommended to expand park and ride capacity by an additional 120 spaces (240 total). This number assumes a 1% annual increase in campus population. This number is for planning purposes, but can be adjusted if future population and/or parking data indicate a difference in parking needs.

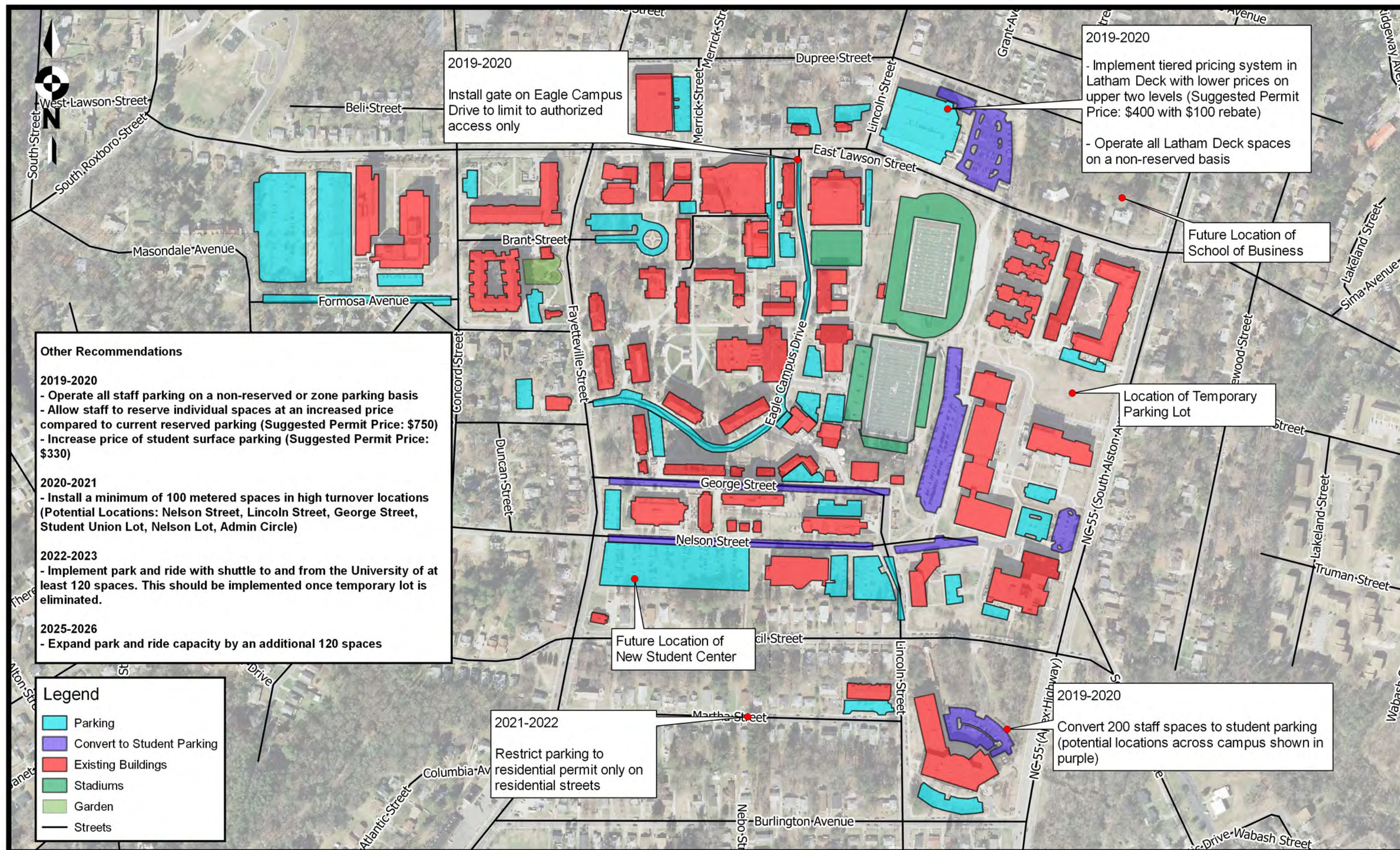


Figure 3

Parking Recommendations Summary (10 years)

4.4 Long Term (10 Year) Revenue and Expense Projections

Projected parking expenses and revenue for the next ten (10) years are outlined in Tables 4.5 and 4.6, respectively. Please note that projected expenses exclude park and ride costs, which were unknown at the time this report was prepared. Overall, the increase in revenue established due to recommendations from years 2017 to 2021 is expected to continue through year 2027.

Table 4.5 - Projected Parking Expenses										
	Projections									
	Short Term					Long Term				
	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Operating Expenses										
Labor	\$289,200	\$295,000	\$370,900	\$378,300	\$385,900	\$393,600	\$401,500	\$409,500	\$417,700	\$426,100
Materials	\$40,800	\$41,600	\$42,400	\$43,200	\$44,100	\$45,000	\$45,900	\$46,800	\$47,700	\$48,700
Metered parking costs	-	-	-	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000
Total Operating Expenses	\$330,000	\$336,600	\$413,300	\$421,500	\$430,000	\$438,600	\$447,400	\$456,300	\$465,400	\$474,800
Maintenance Costs										
Latham deck maintenance	\$23,900	\$24,400	\$24,900	\$25,400	\$25,900	\$26,400	\$26,900	\$27,400	\$27,900	\$28,500
Total maintenance costs	\$23,900	\$24,400	\$24,900	\$25,400	\$25,900	\$26,400	\$26,900	\$27,400	\$27,900	\$28,500
Special Events										
Special events parking enforcement costs	\$27,400	\$27,900	\$28,500	\$29,100	\$29,700	\$30,300	\$30,900	\$31,500	\$32,100	\$32,700
Total special events costs	\$27,400	\$27,900	\$28,500	\$29,100	\$29,700	\$30,300	\$30,900	\$31,500	\$32,100	\$32,700
Debt Servicing	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900	\$1,124,900
Total Expenses	\$1,506,200	\$1,513,800	\$1,591,600	\$1,600,900	\$1,610,500	\$1,620,200	\$1,630,100	\$1,640,100	\$1,650,300	\$1,660,900
Notes: 1) Projections assume 2% inflation of costs per year 2) Park and ride costs were unknown at the time of this study and are excluded 3) Costs of temporary lot construction and gate installation on Eagle Campus Drive are excluded 4) Labor costs assume the addition of a parking coordinator with \$70,000 salary in 2019 2020 5) Materials, maintenance, and special events costs are based on historical averages 6) Metered parking costs are based on per-transaction costs obtained from Passport Parking										

Table 4.6 - Projected Parking Revenue

	Projections									
	Short Term					Long Term				
	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Permit Sales										
Latham Deck total	\$330,200	\$333,500	\$368,300	\$372,000	\$413,900	\$418,000	\$422,200	\$426,400	\$430,700	\$435,000
Surface parking total	\$1,001,800	\$1,011,800	\$1,128,900	\$1,140,200	\$1,151,600	\$1,163,100	\$1,174,700	\$1,186,500	\$1,198,400	\$1,210,300
Park and ride lots	-	-	-	-	-	\$31,600	\$34,700	\$37,800	\$40,800	\$43,900
Total permit sales revenue	\$1,332,000	\$1,345,300	\$1,497,200	\$1,512,200	\$1,565,500	\$1,612,700	\$1,631,600	\$1,650,700	\$1,669,900	\$1,689,200
Hourly Parking										
Latham Deck hourly parking	\$53,200	\$53,700	\$54,300	\$54,800	\$55,400	\$55,900	\$56,500	\$57,000	\$57,600	\$58,200
New metered parking	-	-	-	\$131,700	\$133,000	\$134,300	\$135,700	\$137,000	\$138,400	\$139,800
Total hourly parking revenue	\$53,200	\$53,700	\$54,300	\$186,500	\$188,400	\$190,200	\$192,200	\$194,000	\$196,000	\$198,000
Special Events										
Sports events revenue	-	\$30,000	\$30,300	\$30,600	\$30,900	\$31,200	\$31,500	\$31,800	\$32,100	\$32,400
Other events revenue	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Total special events revenue	\$1,200	\$31,200	\$31,500	\$31,800	\$32,100	\$32,400	\$32,700	\$33,000	\$33,300	\$33,600
Fines	\$138,800	\$138,800	\$138,800	\$138,800	\$141,600	\$144,400	\$147,300	\$150,200	\$153,200	\$156,300
Other Revenue and Reimbursements	\$20,400	\$20,400	\$20,400	\$20,400	\$20,400	\$20,400	\$20,400	\$20,400	\$20,400	\$20,400
Total parking revenue	\$1,545,600	\$1,589,400	\$1,742,200	\$1,889,700	\$1,948,000	\$2,000,100	\$2,024,200	\$2,048,300	\$2,072,800	\$2,097,500
Total parking expenses	\$1,506,200	\$1,513,800	\$1,591,600	\$1,600,900	\$1,610,500	\$1,620,200	\$1,630,100	\$1,640,100	\$1,650,300	\$1,660,900
Revenue less expenses	\$39,400	\$75,600	\$150,600	\$288,800	\$337,500	\$379,900	\$394,100	\$408,200	\$422,500	\$436,600

Notes:

- 1) Projections assume 1% increase in campus population and parking demand per year
- 2) Metered parking revenue is projected based on historical revenue from Latham Deck hourly spaces
- 3) Sports events revenue is based on discussions of revenue sharing with Athletics Department
- 4) Events, fines, and other reimbursements revenue are based on historical averages

5.0 Summary and Conclusion

A parking financial review has been performed for North Carolina Central University (NCCU). The objective of this study was to review University parking operations from a financial perspective and to give recommendations which will improve both the operations and cost effectiveness of parking on campus.

Table 5.1 on the following page summarizes the recommendations related to parking over the next ten (10) years. The short term recommendations (2017 to 2021) seek to more efficiently utilize existing parking resources, in order to delay the need for parking expansion projects. These include modifying faculty / staff parking to a zone system, shifting parking spaces from staff to student parking, and incentives to increase utilization of the Latham Deck. Additional recommendations are given to improve the cost-effectiveness of parking, especially where parking spaces are currently sold below their market value. These strategies include increasing permit prices for some parking types (reserved staff parking and surface student parking), reduction in the number of reserved spaces, and installing metered parking at highly convenient parking locations. Additionally, it is recommended to coordinate with the City of Durham to prohibit non-residential parking on residential streets adjacent to campus. There is a pattern of students parking on these streets as free parking and as an alternative to purchasing a parking permit. The occupancy counts indicate there is spare capacity to accommodate this demand, particularly at the Latham Deck. Short Term (5 year) recommendations are also shown in Figure 1.

In the long term (2022 to 2026), recommendations are made to increase parking supply to keep pace with campus population growth. Specifically, park and ride was selected as a more cost-effective option than alternatives such as new parking decks or on-campus surface lots. It is recommended to open a park and ride lot with 120 spaces once the temporary lot to be built between Childley Hall and the Nursing School is eliminated. This temporary lot will serve to offset parking lost during the construction period of the Student Center. It will also be necessary to ensure adequate park and ride accommodations, including shuttle capacity and frequency, security, lot cleaning, and lighting. In year 2025, it is recommended to expand park and ride capacity by an additional 120 spaces (240 total), or as needed based on future population and/or parking data. Long Term (10 year) recommendations are also shown in Figure 3.

Finally, through discussions with University staff, it is recommended to consider shifting the management of parking from the University Police Department to the Transportation Department. At many universities, parking is either managed by the transportation department (e.g., NC State University) or is a stand-alone department (e.g., UNCG and NC A&T).

In conclusion, the recommendations identified in this study are expected to improve both the operations and cost-effectiveness of the University's parking. The projections shown in Table 4.6 indicate that these recommendations can accomplish a significant increase in parking revenue.

Table 5.1 – Recommendations Summary

Academic Year	Recommendations
2019-2020	<ul style="list-style-type: none"> • Operate all staff parking on a non-reserved or zone parking basis, which will allow increased permit sales and higher utilization of staff parking • Allow staff to reserve individual spaces, but at an increased price compared to current reserved parking. This rate increase reflects the convenience of this parking and the cost of reserving spaces. Suggested permit price: \$750 (\$175 increase). • Convert 200 existing staff parking spaces to student parking in order to relieve demand for additional student parking. Suggested locations: Criminal Justice Nelson Street Lot, George Street, Latham Surface Lot, Law School Upper Lot, Nelson Street, O'Kelly Riddick, and School of Education Front Lot. • Increase price of student surface parking (currently \$300) to reflect convenience of this parking. Suggested permit price: \$330 (\$30 increase). • Implement tiered pricing system in Latham Deck with lower prices on upper two (2) levels in order to incentivize and increase utilization. Suggested permit price: \$400 with \$100 meals/books rebate (\$75 decrease). • Operate all Latham Deck spaces on a non-reserved basis • Install gates on Eagle Campus Drive and limit this street to authorized access only
2020-2021	<ul style="list-style-type: none"> • Install a minimum of 100 new metered parking spaces, especially at highly convenient parking areas with high turnover. Suggested locations: Nelson, Lincoln, and George Streets, Student Union Lot, Admin Circle, and portions of new Student Center lot.
2021-2022	<ul style="list-style-type: none"> • Coordinate with City of Durham to restrict parking to residential permit parking only on residential streets adjacent to campus which currently allow 2 hour parking
2022-2023	<ul style="list-style-type: none"> • Implement a park and ride lot with shuttle service to and from the University, and with a capacity of at least 120 parking spaces. This should be implemented once temporary lot is eliminated. • Ensure adequate park and ride accommodations, including shuttle capacity and frequency, security, lot cleaning, and lighting
2023-2024	<ul style="list-style-type: none"> • No additional recommendations
2024-2025	<ul style="list-style-type: none"> • No additional recommendations
2025-2026	<ul style="list-style-type: none"> • Expand park and ride capacity by an additional 120 parking spaces (240 total), or adjust as needed based on future parking-related data
2026-2027	<ul style="list-style-type: none"> • No additional recommendations