

-----Original Message-----

From: Carol Abernethy On Behalf Of Cal Horton
 Sent: Friday, November 14, 2003 5:30 PM
 To: 'James Coley'
 Cc: Roger Waldon; Sally Greene (w); Bill Strom; Cam Hill; Dorothy Verkerk ; Ed Harrison; Flicka Bateman ; Jim Ward (w) ; Kevin Foy; Mark Kleinschmidt ; Pat Evans; Sally Greene; 'Jim Ward'; 'Edith Wiggins'; Toni Pendergraph; Cal Horton; Flo Miller; Joyce Smith; Ralph Karpinos; Sonna Loewenthal; Owen Franklin; Emily Dickens
 Subject: Citizen Comment - Carolina North

A copy of your email message has been forwarded to each Council Member.
 Carol Abernethy
 Exec. Asst., Manager's Office
 Town of Chapel Hill

-----Original Message-----

From: James Coley [mailto:jpcoley@email.unc.edu]
 Sent: Friday, November 14, 2003 11:09 AM
 To: Town Council
 Cc: rkabrick@retec.com
 Subject: Automobile parking spaces at Carolina North.

Hi, folks. I don't want to jump the gun and will reserve more of my reaction to what we know so far about the Carolina North draft plan, but I did want to plant a seed for your HWCC report work session discussion on Monday.

My initial research shows that the main UNC campus has 729 acres and around 14,200 automobile parking spaces. That's a ratio of about 20 spaces per acre. If 24% of 975 acres at Horace Williams at build-out have the 19,850 automobile parking spaces in the draft plan, that's about 85 spaces per acre!

More significant would be these ratios for square footage (see the HWCC report, page 14, strategy 1B(f)), but I have not been able to put those numbers together yet.

Carolina North is the last major opportunity in Chapel Hill to start fresh with urban design that does not support and worsen automobile dependency and sprawl. The HWCC report has called for it to be "a pedestrian-, bicycle-, and transit-oriented development from the outset" (page 13, goal 1A) and calls for the design to "strictly limit parking" (page 13, strategy 1A(a)). But how are we moving away from automobile-oriented development, and toward transit-oriented transportation demand management, by quadrupling the spaces per acre?!

I hope you will discuss and strongly support these passages in the HWCC report on Monday. Again, they are

* page 13, goal 1A

* page 13, strategy 1A(a)

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* page 14, strategy 1B(f)

Remember: There is no parking shortage. There are too many cars.



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Nov 16, 2003

Dear Members of the Horace Williams Citizens Committee,

"We literally are standing at a crossroads," he said. "The university is getting ready to launch an endeavor that will take the next 50 to 100 years to unfold. We'd better get it right. It's going to be our children's legacy." -- Vice Chancellor Tony Waldrop to the media, Nov 14th.

I completely agree with Tony. I have walked and bicycled on the Horace Williams Tract countless times -- it is a treasure today that we want our grandchildren to appreciate that as well. I thank the UNC administration for its public and open stance on the Carolina North plan, and I fully appreciate his emphasis on the adjective "Draft" in the label "Draft plan".

I applaud UNC still more for its compact design which results in the preservation of more than half of the Horace Williams Tract, now termed Carolina North. Of the tract's 970 acres, about 130 are already developed with UNC Physical facilities south of Estes Drive Extension and about 30 acres as the Town of Chapel Hill Municipal facilities north of Estes across Airport Road from Piney Mountain Road. With the new CN project using only 240 acres, including the 30 already-used acres, this leaves about 600 acres to be left in a natural state. This is wonderful!

I would like now to now analyze the CN project as I have read about it, not specifically to praise or critique its internal features, but rather to assess them in order to help the HWCC measure the impact of CN on its nearby residents and the rest of the citizens of Chapel Hill and Carrboro.

My engineering training requires that I examine developments quantitatively and search for independent confirmation or denial of all its facets. After I have examined a hundred development plans, I realize that there are several numbers that define a plan and project its impacts, positive and negative, on its surroundings. Such numbers are the number of square feet of each land use type, the number of acres developed, number of employees, and especially the number of parking spaces provided. While the UNC committee meetings that I attended attempted to "fly over the plan at 5500 feet" (Bruce Runberg's phrase) without actually understanding these numbers, eventually the numbers are defined and the impacts can be estimated with reasonable accuracy. There is one particular number that both intrigues and alarms me; 19,850 parking spaces. That alone, as I explain below, justifies our meeting in December to react to the CN draft plan.

What follows is an analysis of the plan. Within it, I will clearly state my assumptions so that anyone may challenge them or challenge my analysis.

The CN plan presents 8.4 million sq ft of new buildings that are categorized as

- 6.0 M office
- 2.0 M homes
- 0.3 M retail
- 0.1 M community

and 19,850 parking spaces that are categorized as

- 15,250 in decks and surface lots
- 4,600 in on-street parking

Homes and their parking spaces

I assume that CN homes, attached and unattached, average 1,750 sq ft. If they total 2.0 M sq ft, 1142 homes will be built. This must be high-density housing, approximately 15 units per acre, since only a total of 240 acres will be developed, with its bulk devoted to office uses. I assume that 2.5 cars must be parked at each home. I assume that one car is parked on the lot of each home, leaving 1.5 parking spaces per home required from the general parking. So from the 19,850 space total, 1700 spaces are taken for residential parking.

Parking for retail

I will minimize retail parking, given that the retail is primarily dedicated to local needs, that to a great degree serve walk-in traffic from people living or working on the CN site. I assume 1.5 parking spaces per 1,000 sq ft of retail space, or a total of 450 spaces from the total parking allotment.

Parking for community use

Community use parking is harder to estimate, but since this use is small, a substantial error won't impact the final numbers. I assume 2 spaces per 1,000 sq ft, or a total of 200 spaces. Please note that I am not including a school site in this land use category; it is discussed below.

General parking analysis

Of course parking has counter cycles and is multi-use, consequently I sum three types of parking estimated above and multiply the sum by 0.8 to yield 1880 spaces. When I subtract that from the total, I get the big message about parking so far:

18,000 parking spaces will be built for commuters.

Let's analyze this, put it in an understandable context and discuss its impacts.

Planners assume that a surface parking lot with no topographical limitations can hold 90-100 cars per acre; I assume 95. I assume that 70 pct of the "deck and surface lot" parking is in decks and that 30 pct of this and all of the on-street parking is on the surface. The tallest building at CN will be 3 stories, so I assume that the tallest parking deck will be 3 stories. Hence the total parking area is $((.70*15250)/3 + .30*15260 + 4600)/95$ which equals 134 acres. Therefore 134 acres of the 240, or 56 pct of the land will be used to park cars. This of course is ridiculous, so I'll assume that half of the non-deck surface parking is constructed under buildings so to delete its footprint. That removes 24 acres of surface parking to yield a total of 110 acres, so that 46 percent of the developed land is devoted to automobile parking. This last change is expensive; it requires more difficult construction techniques and substantial new ventilation.

As we all know, the main UNC campus has a severe lack of parking. About 14,000 parking spaces are available for commuters, though 32,000 people commute daily to campus (25K students + 15K fac/staff - 8K on-campus students). As a consequence, the town bus system is heavily used and other alternative transportation forms thrive. On the main campus, the 40,000 members of the university community are spread over 15M sq ft, thus using about 375 sq ft per person. This rate supports the planners' typical office allocation of 400 sq ft per employee. I apply this rate to CN to estimate its number of employees, including the retail and community components -- they will have employees. $6.4 \text{ M sq ft} / 400 \text{ sq ft per employee}$ yields 16,000 employees. I assume that 1,000 CN employees will live in the CN housing, and not drive cars to work, which in turn presents the second big message:

CN will have 18,000 on-site parking spaces for 15,000 commuting employees

This is the polar opposite of "state of the art" transportation. Mass transit, whether on Airport Road or on the rail line, will fail because each person will simply drive his car to CN as people now do to the RTP, unhappily tolerating significant congestion because a parking space is available when they arrive. Far too much of CN is dedicated to parking cars.

I speculate:

CN will be used as a major park ride lot for the main campus. Is this what we want? CN is catering to companies who will finance a building or rent space there only with the promise of one parking space per employee, as they would receive in the RTP or a suburban office park. I don't know the parking ratios at NCSU Centennial Campus.

Neighborhood and town impacts of this much new parking

Moving 18,000 cars on and off the site twice a day will substantially damage the surrounding neighborhoods and make travel in these areas very difficult. CN is served by only a modest surrounding road network. Its feeder roads are Airport, Estes, Seawell School, Homestead and the future Weaver Dairy Extension. To visualize 36,000 additional car trips per day, consider that Chapel Hill's most congested non-interstate road is the CH-Durham Boulevard near I-40, with a daily traffic count of 42,000 (I think this was in 1998). Today we see daily traffic tie-ups around the main campus during rush hours, and CN proposes more auto commuting on fewer roads than the main campus. The unfortunate result is that CN is proposing rush hour traffic jams far in excess of those of main campus.

School site

A potential school deserves discussion as a community use. CN does not plan to provide a school site, but Vice Chancellor Waldrop has stated that a school site is not rejected. Given that more than a thousand homes will be built, the political pressure from both our school board and parents will be so strong that UNC will have little choice except to provide the site. Historically, school sites vary from 20 through 50 acres, depending on the type of school. Most likely that acreage would be taken from the undeveloped land, not the 240 acres currently proposed for development.

Density of Carolina North

To visualize CN, don't think only of McCorkle place. CN will be extremely dense. The main campus, including the health affairs complex has about 15 M sq ft of buildings constructed on 25 M sq ft of land; the ratio is 0.6. CN proposes 8.4 M sq ft of buildings on 10.4 M sq ft of land; the ratio is 0.8. Unlike the main campus, where tall buildings minimize footprints and save green space, CN provides no tall buildings, thereby shrinking close-in green space. This is not a criticism; I recognize that this is done to preserve the areas of the Horace Williams tract that surround the CN development. Would it be better to use four story buildings on CN to provide more open space between them?

Recommendations

I strongly recommend that the total number of parking spaces be reduced to 10,000. This would provide 2.5 spaces per housing unit, 450 for retail needs, 200 for community needs, and 6,400 for commuting employees. Without this reduction, mass transit will fail, since its primary motivator, lack of parking at the target, is eliminated. Furthermore, such a reduction will make the CN project more pedestrian-friendly, safer, quieter, cleaner, more attractive, and halve the auto impact on its surroundings.

I recommend a legally binding contract that requires conservation of the undeveloped parts of the property in perpetuity, or at least for 50-100 years. UNC's needs change by the decade and UNC administrations change by the half-decade. During the recent South Columbia Street dispute, UNC justified changing its stance on a five year-old agreement based in part on the arrival of a new administration. From this history, one can speculate that in twenty years, UNC will have new desires for the undeveloped portions of CN, and a new administration that will not feel tightly bound to the promises of the current one.

(14)

Joe Capowski to HWCC, Nov 15, 2003, page 4

I recommend that CN allocate a school site in its initial planning. I recommend that the housing on CN be required to pay the school impact fee. Since historically, the value of a school site is only four per cent of the cost of a school, I recommend that the town and school system negotiate with UNC for a substantial contribution for the construction of the school, as the Town of Cary did several years ago with a private developer.

I recommend that CN use four-story buildings to reduce its area density, maintain the 240 acre development limit, and use the freed-up space as human space, where people can sit, converse and eat lunch. We have a marvelous climate -- let's take advantage of it.

Finally I recommend a financial hold-harmless clause for town citizens. The financial model for CN is new and unlike any into which UNC has entered. It should be publicly presented, discussed and understood. An expert in such financial models and their developments, who is responsible to the town rather than to the university, should analyze the model, assess its probability of success, and estimate its impact on town services and local taxes. CN's economic success depends on major factors that are well beyond UNC's control, such as the future of U.S. health care financing, ever-continuing increases in the budget of the National Institutes of Health, and a healthy U.S. and N.C. economy that fosters spin-off companies. In a period of recession, it is possible that the Town of Chapel Hill would be forced to provide services to a non-profitable Carolina North that cannot provide sufficient funds to cover the cost of the town services. Philosophically, the town should decide how entrepreneurial a stance to take on CN.

To return to Tony Waldrop's opening, I believe that the development of Carolina North can be a marvelous legacy that we will leave our heirs, and ask the town and university to accept this letter in a spirit of discourse that will make the development an even better project.

Yours truly,
Joe Capowski