

September 15, 2016  
113 Livingstone Dr.  
Cary, NC 27513

Michael Landguth,  
RDU Airport President and CEO  
RDU Airport Authority  
*michael.landguth@rdu.com*

**Re: RDUVision2040**

Dear Michael,

As a resource economist who has spent many years researching land use alternatives, I am writing to urge the Airport Authority to consider more appropriate alternatives to their utilization plan for the corridor along Old Reedy Creek Rd. than those currently envisioned in the RDU Vision 2040 plan.

There are better and more financially lucrative development alternatives which could be put into practice on this parcel. My objective in writing this letter is to demonstrate that an alternative plan should result in a more creative use of the acreage, while providing the Airport Authority with a superior and sustainable economic return. In addition it would offer the RTP region improved opportunities for intelligent growth.

The greatest potential value of the Airport Authority parcel around Old Reedy Creek Rd. is unquestionably due to its combined proximity to air travel and Umstead State Park. A commercial development plan which both preserves the relatively unimpacted natural character of the Old Reedy Creek parcel and simultaneously leverages its proximity to Umstead State Park has the potential to create an economic resource for the Airport Authority that would rival anything in the State and perhaps the Southeast. This would be accomplished by *embedding* commercial developments harmoniously within a quasi-natural landscape, rather than paving this landscape over or quarrying it out.

An aesthetically attractive airport complex which might incorporate executive training, conference centers, lodging, dining and retail may be easily envisioned as a preferable alternative to the current plan. This, in combination with proximity to the natural amenities of Umstead State Park and easy access to the surrounding opportunities of a thriving RTP community, would create an unparalleled asset for the Airport Authority for many decades to come. Such a utilization plan would have a higher economic value to the Airport than the current alternative as measured by its Net Present Value (see Attachment A). Durham's Tobacco campus and NC's Sierra Nevada brewery complex in Mills River, NC are but two recent examples of how such a business development model can use quasi-natural aesthetics to increase real economic returns.

Umstead State Park is a unique urban resource for the RTP, with more than 1.3 million user days annually and growing. This user base increases to an estimated 4 million annually if the connecting trails and bike routes (Wake County's Lake Crabtree County Park, American Tobacco Trail, East Coast Greenway, NC 2 and US 1 bike routes, Black Creek Greenway, Reedy Creek Greenway, Crabtree Creek and Neuse River Greenway) are additionally considered. Such natural areas are economically distinctive for two important reasons: (i) they are relatively scarce in major metropolitan areas; (ii) in a national economy that is increasingly economically polarized, resource constrained individuals can enjoy them at

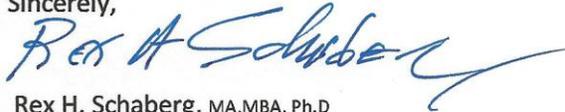
minimal cost, while the affluent find, appreciate (and can pay for!), synergy between "greenscapes" and more upscale attractions (e.g., a good meal is better with a great view). All members of both groups spend money in the surrounding community so there is an ongoing economic multiplier effect to both business and the tax base.

A traditional commercial development such as those blighting the acreage around the majority of our national Airports (and an expanded rock quarry, as is currently contemplated) would be indistinguishable from a host of otherwise available facilities and available land tracts in the area (except that the Airport development would create commercial infrastructure exempt from contributing to the municipal tax base!) Once the character of this landscape is destroyed, the opportunity to exploit its economic potential as a natural area is gone forever. In addition to the aesthetic loss, this would impose an artificial and unnecessarily low ceiling on the revenues the Airport Authority might generate from this parcel over the life of the Airport (Attachment A).

Many in Wake County, including myself, could be motivated to collaborate with the Airport Authority to develop a "greener", more sustainable, and ultimately more lucrative alternative to the current RDU Vision 2040 plan. I hope we, and the community, may have that opportunity.

Thank you for your consideration.

Sincerely,



Rex H. Schaberg, MA, MBA, Ph.D

#### Attachments

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## Attachment A

# Net Present Value

The Research Triangle Park has experienced astonishing growth over the last several decades, and there is every likelihood that this growth will continue for the foreseeable future. To meet the needs of our vibrant and expanding community, the Airport Authority requires the equivalent of an “economic annuity” – a dependable stream of funds not only today and tomorrow, but for many decades into the future. A critical contribution made by Net Present Value (NPV) to investment decisions is this explicit consideration of *project duration*.

**In the case of the RDU Airport development**, a consistent funding stream over the long term is the preferred economic approach. A business development plan which leverages growing consumer preferences for “nature”, natural products, and greenspace, and combines these with proximity to both the Airport and Umstead State Park has the potential to increase in economic value over time as such resources become increasingly rare, as well as serving as “an economic and environmental show-piece” for the region. Once the character of this landscape is destroyed, the opportunity to exploit its economic potential as a natural area is gone forever. Alternately, an environmentally proactive approach could enhance the value of the asset (and resulting cash flows) for the Airport directly, as well as making the RTP region a more desirable destination for business, providing an economic multiplier effect to the RTP community. A review of the Sierra Nevada Mills River, NC development is an outstanding example (<http://www.sierranevada.com/blog/north-carolina-brewery/borrowing-beauty-from-nature>) of how opportunistic marketing can exploit and leverage “natural values” of a location to enhance the value and appeal of a destination retail complex.

Such an approach is very appropriate for the RDU Airport development as it offers the promise of an appreciating cash stream sustained over a very long time horizon. NPV offers a tool to formally evaluate the desirability of such an alternative.

NPV provides the means to compare the desirability of alternative investments which generate variable amounts of return at different times. The simple notion is: It’s better to have money today, UNLESS it’s better to have more money tomorrow. This attachment is intended to allow folks to grasp the intuition behind the NPV analysis without getting bogged down in the numbers.

There are several reasons why money might be presumed (in this case incorrectly) to be more valuable today. In an economy with inflation, prices will rise. You can buy more with \$100 if you spend it today than if you wait a couple years. Even if you don’t choose to spend it, in an economy with positive interest rates you can invest it and earn more money. Finally, waiting introduces an element of uncertainty and risk. Who knows what tomorrow will bring? For any project, these factors combine to allow the calculation of a “discount factor” which captures what rate of return would be required to make the project worth pursuing, or alternately, how much the real economic value of future money is “degraded” by having to wait for it.

Selecting the correct discount factor ( $k$ ) is one of two critical elements required to “get the right answer” from NPV. In an environment with high inflation, the discount factor needs to be correspondingly higher to offset purchasing power loss. Projects in publicly traded companies need higher discount factors to meet investor expectations. Enterprises with flexible business models need relatively higher discount

factors to account for the fact that they might choose to shut down a project and redeploy assets. **In the case of the Airport Authority:** they face a low inflation environment, without distorting pressure from external investors, and they know they are not going to be getting out of the business of running an Airport. Further, they know they will be doing it for an exceedingly *long* time. All these factors argue for a discount rate (k) very close to zero (adjusted for possible inflation). The intuition gained by this analysis is that: by the nature of its business mandate, the economic value of a specific (inflation adjusted) annual revenue (NCF<sub>t</sub>) to the Airport Authority will be almost undiminished, whether it is received in five or in fifty years. The take-away message is that the Airport Authority should seek a plan that keeps revenues flowing (and hopefully growing!) for as long as they intend to be in the Airport business.

$$NPV = \sum_{t=1}^n \frac{NCF_t}{(1+k)^t} - NCF_0$$

NCF<sub>0</sub> = initial cash outlay on project  
 NCF<sub>t</sub> = net cash flow generated by project at time t  
 n = life of the project  
 k = required rate of return

The second critical component of a useful NPV analysis is an appropriate estimation of the stream (NCF<sub>t</sub>) and duration (n) of cash flows. The lower the discount rate (k), the more important are the out-years of the duration, as the “value” of that money remains undiminished. **In the case of the Airport Authority:** My understanding is that an industrial rock quarry would provide the Airport Authority with cash flow for 20 years, leaving it, at the end of the day, with a depleted asset with no commercial potential, and little or no potential for drinking water or storm-water abatement on that area of the tract. Really, just “a hole in the ground”. A traditional commercial office park/hotel complex would be in no way unique and would be expected to decline in economic value as it competes in future years with an increasing array of more recently constructed and otherwise indistinguishable facilities. Ultimately such a development might do no more than assist RTP in turning into the Atlanta of tomorrow, and possibly the Detroit of 50 years from now.

In contrast, a business development plan which leverages growing consumer preferences for “nature”, natural products, and greenspace, and combines these with proximity to both the Airport and Umstead State Park has the potential to increase in economic value over time as such resources become increasingly rare, as well as serving as “an economic and environmental show-piece” for the region. This could enhance the value of the asset (and resulting cash flows) for the Airport directly, as well as making the RTP region a more desirable destination for business, providing an economic multiplier effect to the RTP community.

The attached (Attachment B) article “Ascribing value to ecological processes: an economic view of environmental change” documents the fact (p#334) that consumers in North Carolina experience the highest level of increased benefit when outdoor recreational opportunities are increased from low to moderate levels. This is exactly the opportunity offered by the Old Reedy Creek tract, and it is this (steadily appreciating) economic potential that can be monetized and exploited by the Airport Authority for many decades to come -- by embedding aesthetically attractive commercial developments that are appropriate to (and integrated with) the semi-natural characteristics of the available tract.

While in no way intended to be either prescriptive or comprehensive, examples of suitable synergistic enterprises might include: an executive training center; conference facilities; human resources team-building/training partnerships; ropes courses; zip lines; high-end, low profile lodging; local brewery/dining experiences modeled on a more appropriately scaled model of Sierra Nevada's Mills River, NC offering; bike and segway rentals; retail outlets; etc.

All of these options and more could be developed on the tract by utilizing (rather than destroying) its environmental aesthetic. While more detailed financial analysis would obviously be required to quantify the benefits of such a development, common sense suggests it should be strongly considered. A review of consumer marketing over the last several decades shows that national brands are increasingly linking their products to outdoor recreation to increase brand appeal (e.g., Subaru Outback). While the future is always uncertain, it seems a given fact that this trend will continue as urban greenspace becomes more threatened, scarce, and increasingly valued. In the context of NPV to the Airport Authority, this would suggest it has a choice between a current plan with understood revenue potential and a duration of 20 years, versus the opportunity to explore a plan with unknown but likely increasing revenue potential over a period of fifty years or more. The potential benefits to the Airport Authority (and to the surrounding community) are of such significant magnitude that I feel strongly they deserve a carefully considered investigation.

## Attachment B

# Valuing Environmental Attributes

The take-away message from the following academic article is that consumers consider significant purchases as “bundles” of attributes (e.g., a car might be: color, comfort, power, safety, efficiency, etc.). These attributes can be teased apart and assessed for their relative “importance values”. When some components of a “bundle” are environmental attributes, their relative importance can be isolated.

The attached article documents that random NC consumers and a variety of identified special interest groups all experience the greatest increase in perceived benefit when recreational opportunities are increased from low to moderate levels (Fig 1. p.334); or alternately (as is appropriate in the RDUVision2040 case), when recreational values are not degraded from a moderate level to a low or nonexistent level. It is this consumer preference which creates a “willingness to pay” for the identified environmental attribute, and which can be successfully monetized by the Airport Authority for many decades to come, if they harmonize their commercial development with the environmental amenities of the tract and its proximity to Umstead State Park.



Ascribing\_value\_to\_  
ecological\_processes.