

**A RESOLUTION TO ENCOURAGE AND SUPPORT THE CONSIDERATION OF  
TOLL FINANCING TO CONSTRUCT THE TRIANGLE PARKWAY  
(NC 147 SOUTHERN EXTENSION FROM I-40 TO I-540)  
Resolution No. 03/2004-05**

WHEREAS, the anticipated growth of the population of the Research Triangle Region, - more than 70 percent between 1980 and 2000 compared to a 20 percent national growth rate - has created a tremendous and growing strain on the Triangle's transportation system; and

WHEREAS, the region's economic heart, the Research Triangle Park, still has the potential to double in employment from 45,000 to 90,000 employees by build out; and

WHEREAS, the Triangle Parkway would provide an alternative route and a connector to the Park that will improve mobility throughout the region; and

WHEREAS, a completed Triangle Parkway will help attract, create, and retain jobs throughout the Triangle area by providing delay-free travel to employees, suppliers, and customers during off-peak periods and dramatically reduced travel times during peak periods; and

WHEREAS, the construction of the Parkway will help relieve traffic congestion which hampers the ability of areas beyond the core counties to share in the Triangle's prosperity;

NOW, THEREFORE, BE IT RESOLVED by the Carrboro Board of Aldermen that the Board requests that the North Carolina Turnpike Authority consider the Triangle Parkway (NC 147 southern extension to I-540) as one of its initial three toll projects authorized, in order to provide enhanced access to jobs and mobility to and through Research Triangle Park from points throughout the greater Triangle.

BE IT FURTHER RESOLVED that the Carrboro Board of Aldermen encourages the appropriate use of free-flow electronic tolling with variable pricing to help coordinate supply and demand, encourage bus transit use and carpooling, and maintain optimum travel service on the Triangle Parkway – the NC 147 southern extension to I-540.

This the 17th day of August 2004.

**A RESOLUTION TO ENCOURAGE AND SUPPORT THE CONSTRUCTION OF  
EXPRESS HIGH OCCUPANCY VEHICLE LANES ALONG INTERSTATE 40 IN  
THE TRIANGLE AREA USING TOLL FINANCING OR OTHER MEANS**

**Resolution No. 01/2004-05**

WHEREAS, the anticipated growth of the population of the Research Triangle Region, - more than 70 percent between 1980 and 2000 compared to a 20 percent national growth rate - has created a tremendous and growing strain on the Triangle's transportation system; and

WHEREAS, the region's economic heart, the Greater Research Triangle Park area still has the potential to double in employment from 100,000 to 200,000 employees by build out; and

WHEREAS, significant growth in jobs and enrollment is anticipate a the region's colleges and universities - including an additional 20,000 at Carolina North at the University of North Carolina at Chapel Hill, and an additional 30,000 at NC State University's Centennial Campus; and

WHEREAS, the Triangle continues to struggle with increasing congestion and air quality concerns; and

WHEREAS, federal transportation funding to North Carolina has not increased adequately to meet the need for expanded roadways, transit, bicycle and pedestrian facilities; and

WHEREAS, the ability of North Carolina's Highway Fund - and indeed the Highway Trust Fund, passed in 1989 - to serve as a statewide funding source for all needs is being steadily eroded by ever increasing statewide demands; and

WHEREAS, a continued effort to forge a consensus on the need for additional revenues and institutional frameworks to improve mobility has been sustained by members of the Regional Transportation Alliance - a partnership of 15 chambers of commerce - in concert with local, county and State elected officials; and

WHEREAS, a 2000 study commissioned by the mayors of Raleigh, Durham, Chapel Hill, and Cary identified a series of multimodal transportation components - such as new express lanes along congested freeway corridors - that would help to maintain mobility and travel options throughout our urban region;

NOW, THEREFORE, BE IT RESOLVED by the Carrboro Board of Aldermen that the Board supports implementing express high occupancy free-flow lanes along Interstate 40 in Orange, Durham, and Wake Counties (with the western Triangle being the higher priority), in order to encourage carpooling and transit ridership and create an effective alternative for users during peak travel conditions.

**Attachment "B"**

BE IT FURTHER RESOLVED that the Carrboro Board of Aldermen encourages the consideration of free-flow electronic tolling that would enhance the mobility of travelers while providing an additional source of revenue to accelerate the construction and maintenance of the express high-occupancy corridor.

This the 17th day of August 2004.

**A RESOLUTION SUPPORTING THE TRIANGLE MOBILITY COMPACT**  
**Resolution No. 02/2004-05**

WHEREAS, the anticipated growth of the population of the Research Triangle Region - more than 70 percent between 1980 and 2000 compared to a 20 percent national growth rate - has created a tremendous and growing strain on the Triangle's transportation system; and

WHEREAS, the region's economic heart, the Greater Research Triangle Park area still has the potential to double in employment from 100,000 to 200,000 employees by build out; and

WHEREAS, significant growth in jobs and enrollment is anticipated at the region's colleges and universities - including an additional 20,000 at Carolina North at the University of North Carolina at Chapel Hill, and an additional 30,000 at NC State University's Centennial Campus; and

WHEREAS, the Triangle continues to struggle with increasing congestion and air quality concerns; and

WHEREAS, federal transportation funding to North Carolina has not increased adequately to meet the need for expanded roadways, transit, bicycle and pedestrian facilities; and

WHEREAS, the ability of North Carolina's Highway Fund - and indeed the Highway Trust Fund, passed in 1989 - to serve as a statewide funding source for all needs is being steadily eroded by ever increasing statewide demands; and

WHEREAS, a 2000 Study commissioned by the mayors of Raleigh, Durham, Chapel Hill, and Cary identified an estimated \$8 billion shortfall in state and federal revenues to meet future mobility needs; and

WHEREAS, that Study identified a series of multimodal transportation components - such as new highways, pedestrian and bicycle facilities, regional rail service, municipal and regional bus service, and express lanes along congested freeway corridors - that would help to maintain mobility and travel options throughout our urban region and improve air quality; and

WHEREAS, any effort to protect and improve mobility requires a comprehensive and broad-based strategy, including cooperation with the state Blue Ribbon Commission for Urban Mobility needs and other venues that provide opportunities to address growing congestion; and

WHEREAS, a continued effort to forge a consensus on the need for additional revenues and institutional frameworks to improve mobility has been sustained by members of the

## **Attachment "C"**

Regional Transportation Alliance - a partnership of 15 chambers of commerce – in concert with local, county and State elected officials;

BE IT RESOLVED, that the Carrboro Board of Aldermen supports working with regional partners in order to encourage, identify, and implement the local revenue sources needed to help the Triangle and other metropolitan regions in North Carolina gain more control over our regional mobility future.

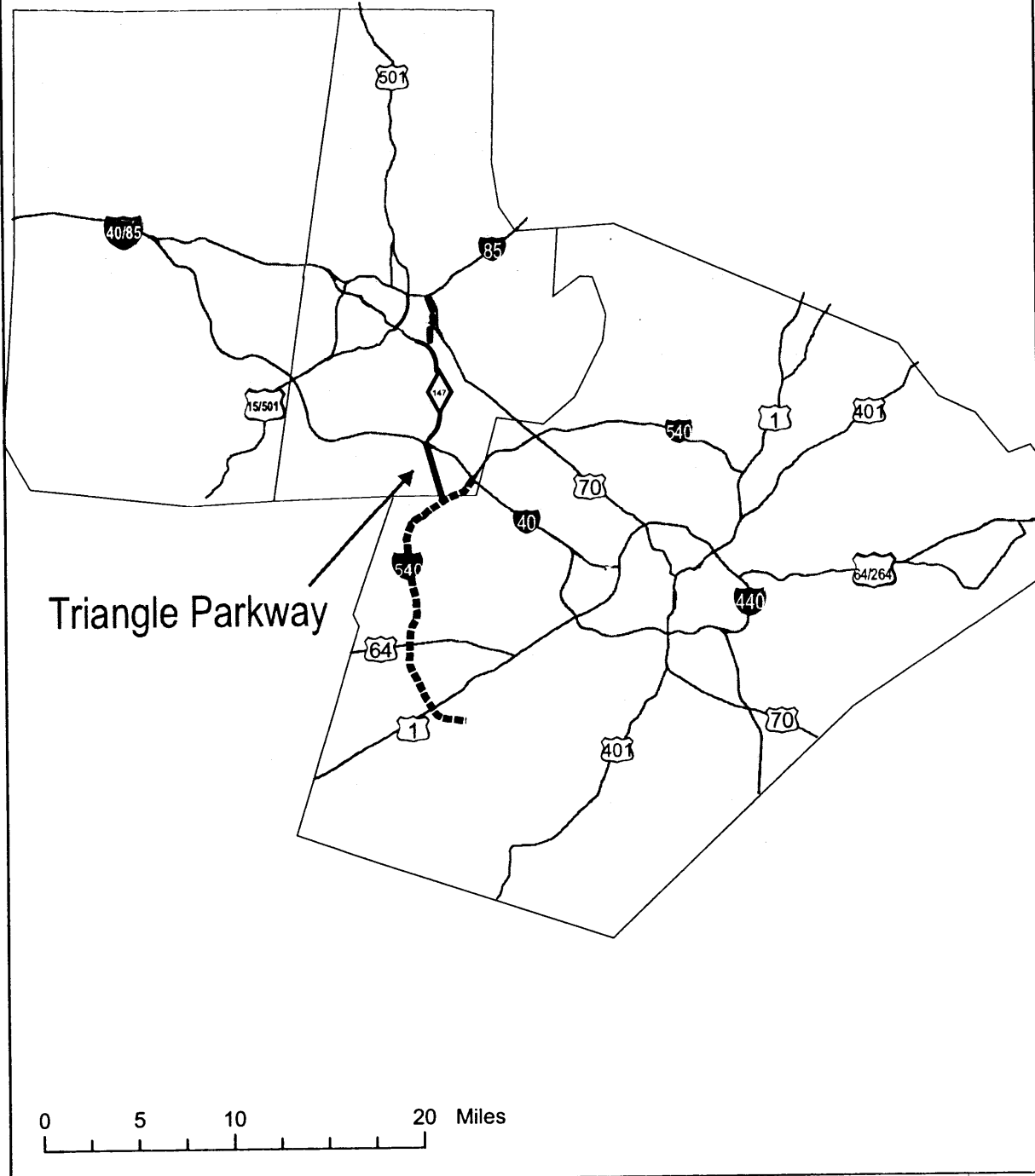
This the 17th day of August 2004.



## TRIANGLE PARKWAY – NC 147 SOUTHERN EXTENSION – FACT SHEET

- The proposed Triangle Parkway freeway between I-40 and I-540 is listed as a priority on both metropolitan transportation improvement program (MTIP) plans by both area Metropolitan transportation Planning Organizations (MPOs).
- The Triangle Parkway was listed as a proposed commuter route to the Research Triangle Park area in 1958 - nearly 50 years ago - and the new section of I-540 will include an interchange for it (instead of Davis Drive).
- The congestion management study for I-40 conducted by a consultant for NCDOT identified the Triangle Parkway – in conjunction with portion of I-540 currently under construction in western Wake County – as the only planned freeway which would offer any relief to the very congested section of I-40 serving Research Triangle Park.
- Order of magnitude cost estimates from NCDOT and the MPOs range from \$70-\$100 million or so for the section between I-40 and I-540 - a distance of about 3.2 miles.
- The NC Turnpike Authority was created in 2002 under statute § 136-89.182. Statute § 136-89.180 noted that "a toll program can speed the implementation of needed transportation improvements by funding some projects with tolls."
- According to the Turnpike Authority, new toll roads will "relieve the burden on other highways and enhance our state's overall economic competitiveness." The Authority will "complement the Department of Transportation's ongoing congestion-fighting efforts and help meet more transportation needs than the Department could otherwise afford."
- The Parkway has the potential to be accelerated by several years through toll financing.
- Statute § 136-89.197 states that NCDOT "shall maintain an existing, alternate, comparable nontoll route" to each proposed Turnpike route.
- In the case of the Triangle Parkway, at least three alternates would be available: NC 55 (to the west of Triangle Parkway), Davis Drive (which would cross the Parkway), and I-540 to I-40 (to the east of the Parkway).
- Electronic tolling – currently in use today on routes such as 407-ETR near Toronto and the Pocahontas Parkway in Virginia – would allow high-speed collection of toll revenues without any delay to users of the Triangle Parkway.
- In addition to providing a time-saving alternate route for all motorists, the existence of tolls will encourage bus transit use and carpooling along the corridor.
- In conjunction with the proposed sections of I-540, the Parkway would create a north-south free-flow route in the center of the region – providing convenient access between downtown Durham, Research Triangle Park, Morrisville, Cary, Apex, Holly Springs, Fuquay-Varina, Angier, and points within and beyond the greater Triangle.
- When the East End Connector is constructed near downtown Durham, the Triangle Parkway will provide a direct link between I-85 and I-540.

# Triangle Parkway Vicinity Map





D-3

***Approved resolutions supporting the consideration of toll financing by the North Carolina Turnpike Authority to accelerate construction of the Triangle Parkway (NC 147 southern extension between I-40 and I-540):***

- Town of Cary  
*(passed May 27, 2004)*
- Town of Chapel Hill  
*(passed June 20, 2004)*
- City of Durham  
*(passed June 7, 2004)*
- Town of Morrisville  
*(passed May 24, 2004)*
- County of Durham  
*(passed June 7, 2004)*
- Capital Area Metropolitan Planning Organization (CAMPO)  
*(transportation planning entity serving all of the municipalities in Wake County)*  
*(passed May 19, 2004)*
- Triangle Transit Authority  
*(passed May 26, 2004)*
- Raleigh-Durham Airport Authority  
*(passed May 20, 2004)*
- Cary Chamber of Commerce  
*(passed May 19, 2004)*
- Chapel Hill-Carrboro Chamber of Commerce  
*(passed July 15, 2004)*
- Greater Durham Chamber of Commerce  
*(passed May 27, 2004)*
- Greater Raleigh Chamber of Commerce  
*(passed May 12, 2004)*
- Morrisville Chamber of Commerce  
*(passed May 12, 2004)*
- Regional Transportation Alliance  
*(passed February 12, 2004)*
- Regional Transportation Strategy public-private partnership team  
*(passed April 16, 2004)*
- Research Triangle Park - Owners and Tenants Association  
*(passed March 11, 2004)*
- Research Triangle Foundation  
*(passed March 11, 2004)*

*(partial list as of Thursday, July 15, 2004)*



# Some Like It HOT: High-occupancy toll lanes work best on high-traffic roads. Without congestion, drivers have little incentive to pay the toll.

*Governing Magazine*, May 2002

Anthony Downs, *Senior Fellow*, Economic Studies

Economists advocate using tolls to ration space on congested roads. Their theory goes like this: Since drivers during peak hours do not have to bear the costs of the delay their presence on highways imposes, many drivers enter roads during peak hours. If a toll were charged during congested periods—and if it were set high enough—the number of drivers entering the road could be reduced enough to maintain rapid traffic flow.

In practice, this idea would be unacceptable to most American drivers. They believe high tolls would force them off the best roads during the most convenient hours while wealthier commuters move rapidly on those roads—a situation that strikes most drivers as grossly unfair. As I see it, this sense of unfairness is now, and will always remain, an insurmountable obstacle to charging variable tolls on congested freeways.

High-occupancy vehicle lanes—highway lanes designated for use only by vehicles containing two, three or more occupants—are a widely used alternative. HOV restrictions can drastically reduce the number of vehicles using such lanes, permitting cars that qualify for the lanes to travel rapidly during peak hours. This should create an incentive for people to switch from driving alone to carpooling, thereby expanding road capacity.

However, experience shows that the number of vehicles using HOV lanes is usually well below the capacity of each lane. Thus, HOV lanes are often underutilized.

Another approach involves high-occupancy toll—HOT—lanes. These are lanes that can be used by both high-occupancy vehicles (either without charge or with a reduced toll) and single-occupancy vehicles (with a variable toll during peak hours). The toll is determined by hourly vehicle flows and is set high enough in peak hours to keep the number of users down and, consequently, speeds of vehicles on the road up.

HOT lanes, however, do not eliminate peak-hour congestion on a crowded expressway, since such lanes comprise only a limited part of the road's total capacity. The normal lanes remain heavily congested during peak hours. But HOT lanes do provide all drivers with a choice of paying a toll and moving rapidly or using toll-free normal lanes and experiencing congestion. HOT lanes have been used successfully on State Route 91 in Southern California since 1995, where they have notably reduced commuting times on both the HOT and normal lanes.

HOT lanes work best on roads where there is heavy traffic and long delays during peak hours. Without such congestion, drivers would have little incentive to pay significant tolls.

Creation of both HOV and HOT lanes is much more acceptable if it is done by adding capacity to an existing road. Conversion of existing lanes reduces the overall capacity of the road, thereby increasing congestion on the remaining normal lanes. Yet the new HOV or HOT lanes are clearly less congested than the remaining normal lanes. So the peak-hour drivers still on normal lanes realize they have been penalized with greater delays to benefit people using the HOV or HOT lanes. This will enrage many drivers, who will vehemently protest to public officials, often causing speedy reversal of such conversions.

Converting existing HOV lanes to HOT lanes should be considered only if the HOV lanes are significantly underutilized to begin with. If an existing HOV lane is so heavily used by HOVs during peak hours that it is near the capacity it can handle while maintaining high speeds, converting it to a HOT lane may reduce the road's efficiency. Such conversion would allow some SOVs into that lane during peak hours, and tolls might drive some HOVs away. That would reduce the total number of persons using these lanes in peak hours.

Surveys of HOT lane users show that people with relatively high incomes are more likely to use them regularly than people with relatively low incomes. On the other hand, anyone can use a HOT lane for high-speed movement on a particular day when such

Some Like It HOT: High-occupancy toll lanes work best on high-traffic roads. Without congestion, driver...  
movement is important to him or her—which would be impossible if the road was toll-free.

Since the per lane per hour capacity of HOT lanes is limited by the need to maintain high speed, there may be long lines of drivers waiting to get onto those lanes during peak hours. This would offset some of the benefits of the HOT lanes.

A few other pointers on HOT lanes: They should be created only as part of the entire highway network in which they will be located, with full recognition of how those lanes will affect the whole network. Also, HOT lanes will be more politically acceptable if the money collected from the tolls is clearly going to be spent improving the capacity of that road or others in the same basic network.

In the right circumstances, HOT lanes can be a means of at least offering an option during peak hours to drivers willing to pay for a fast-moving advantage. Such a choice would not exist without the HOT lanes.

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