DCHC

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

Member Governments
Town of Carrboro
Town of Chapel Hill
County of Chatham
City of Durham
County of Durham
County of Orange
NC Department of Transportation
Town of Hillsborough

DURHAM – CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION TECHNICAL COORDINATING COMMITTEE (TCC)

AGENDA

January 25, 2006 **City Council Committee Room**
9:00 a.m. **2nd floor Durham City Hall**

1. **Preliminaries**

2. **Adjustments to the Agenda**

3. **Public Comments**

ACTION ITEMS

4. Approval of December 21, 2005 TCC Meeting Minutes
(Attachment 4)

A copy of the December 21, 2005 minutes is enclosed as Attachment 4.

TCC Action: Approve minutes of the December 21, 2005 TCC meeting.

5. 2005-2006 Unified Planning Work Program (UPWP) Amendment #1
(Attachment 5, 5A, 5B & 5C)
Mark Ahrendsen, TCC Chair
Felix Nwoko, LPA Staff

Annually, the DCHC MPO prepares a Unified Planning Work Program (UPWP) which details and guides the urban area transportation planning activities. The UPWP provides yearly funding allocations to support the ongoing transportation planning activities of the DCHC MPO. The UPWP must identify MPO planning tasks to be undertaken with the use of federal transportation funds, including highway and transit programs. Funds that would not be expended during the 2005-06 fiscal year must be de-obligated through an amendment in order for the funds to be available for programming during the next fiscal year (2006-07). Accordingly, the proposed amendment reflects the de-obligation of funds originally programmed for major emphasis projects. The proposed amendment also reflects reallocation of funds for individual planning tasks.

Attachment 5 is a memo that provides additional information regarding Amendment # 1 to the FY 2005-2006 UPWP. The revisions to the STP-DA funding table are illustrated in Attachments 5A and 5B. The proposed amendment to the 2005-2006 UPWP is presented in Attachment 5C.

TCC Action: Forward UPWP amendment and revisions to the STP-DA funding table to TAC with recommendation of approval.

6. 2006-2007 Unified Planning Work Program (UPWP) Areas of Emphasis (Attachment 6)
Felix Nwoko, LPA Staff

Development of the 2006-2007 Unified Planning Work Program (UPWP) will begin shortly. The draft schedule for the development of the 2006-2007 UPWP is presented in Attachment 6. The schedule will be finalized as soon as the Public Transportation Division (PTD) provides the MPO with transit UPWP allocations and deadline for submitting transit element of the UPWP to the Division.

TCC Action: Receive update, discuss and provide comments.

7. Distribution Formula for FTA Section 5307 Funds (Attachment 7)
David Bonk, TCC Vice-Chair
Steve Mancuso, DATA
Felix Nwoko, LPA Staff

Pursuant to the TAC directives, the TCC chair requested MPO transit operators to develop a recommendation on the distribution formula for Section 5307 funds. The transit operators met several times to discuss this matter and decided that the issue of making any kind of recommendation to the TCC or TAC hinges on getting clarification on the specific elements of the federal transit funding formula. Any decision on options for incorporating a productivity factor into the allocation process will depend on providing details about how that would affect funding for the transit agencies. The impact of new federal funding guidelines will need to be explored further before a decision is made. The matter was discussed at the December 21 meeting and it was suggested that this matter be brought back at the January meeting, to provide time to interpret the new SAFETEA-LU regulations pertaining Section 5307 programs. Attachment 7 is a memo from DATA that summarizes the recommendation of DATA and TTA concerning this subject matter.

Requested TCC Action: Receive memo from DATA and take action as appropriate.

8. American Tobacco Trail – Phases E and F (Attachment 8, 8A, 8B, 8C, and 8D)
Felix Nwoko, LPA Staff
Alison Carpenter, LPA Staff

At the October 12, 2005 TAC meeting, funding options for the American Tobacco Trail Phases E and F were presented. After considerable discussion, the TAC directed the TCC to evaluate the American Tobacco Trail funding allocation for Durham and Chatham Counties, and recommend a funding split for the recent federal earmark. The TCC discussed this matter at

their October 26, 2005 meeting and referred the item to the Bicycle and Pedestrian (Bike/Ped) subcommittee for a recommendation on the project scope and a plan to fully fund the completion of the ATT in Durham and Chatham counties.

On November 14, 2005, the Bike/Ped subcommittee discussed the need to view the two ATT project phases as one MPO project, and create an overall funding strategy for both project phases to be completed through the 2007-2013 TIP. On December 5, 2005, the Bike/Ped subcommittee met again and estimated the combined total cost of construction for ATT Phases E and F to be approximately $8.28 million. This cost includes construction of a 'signature' bridge and paved trail in Durham County, as well as two bridges and trail improvements in Chatham County, and also includes a 20% contingency for unforeseeable cost increases.

Currently, there is $4.9 million identified from a variety of local, state and federal funding sources, including the $1.3 million funding available through the new federal earmark. The Bike/Ped subcommittee forwarded this information to the TIP/STP-DA subcommittee for further recommendation on a funding scenario for the project in the 2007-2013 TIP. The Bike/Ped subcommittee also decided that the TCC should recommend to the TAC that a letter be sent to the Town of Cary requesting local participation on the ATT. This letter has been drafted and sent to the Town Manager.

The TIP/STP-DA subcommittee met on January 18th, 2006, and discussed a timeline for the 2007-2013 TIP process. Due to the TIP timeline, the full funding recommendation for the ATT is expected to be available in April 2006. Prior to that date, the TCC and TAC will be updated on progress, and asked to update the NCDOT Bicycle and Pedestrian Division and others on the project status and MPO approach. Attachment 8D is the minutes from the January 18th, 2006 TIP subcommittee meeting.

Attachment 8 is a memo providing background information on this item. The December 5 TCC Bike/Pedestrian subcommittee minutes are included as Attachment 8A. Attachment 8B is a map of the full 23-mile American Tobacco Trail corridor, and Attachment 8C is a map of the Phase F ATT corridor, with upcoming Town of Cary annexation detailed.

Requested TCC Action: Receive subcommittee update and provide comments.

9. <u>Old Durham-Chapel Hill Rd Bicycle/Pedestrian Feasibility Study</u>
(See Attachment 9, 9A, and 8D)
Felix Nwoko, LPA Staff
Alison Carpenter, LPA Staff

At their October meeting, the TCC discussed the draft report, including the consultant's recommendation and comments from local governments, and subsequently referred this item to the Bicycle and Pedestrian (Bike/Ped) subcommittee to develop a recommendation for fully funding the project. The subcommittee discussed the preference for funding the project through the 2007-2013 TIP using STP funds. Other funding options discussed include STP-DA, Safe Routes to School and/or discretionary funding for Division area bike/pedestrian projects, allocated by NCDOT Board members. The Bike/Ped subcommittee forwarded the item to the TIP/STP-DA subcommittee for further recommendations on a funding scenario for the project in the 2007-2013 TIP. The TIP/STP-DA subcommittee will be asked to provide a funding

recommendation to the TAC in April 2006, when further information is available from NCDOT regarding the TIP process. The minutes for this meeting are provided in Attachment 8D.

The Bike/Ped subcommittee also discussed the "Remaining Issues" section of the report. It was decided that the report should recommend a combination of curb-and-gutter (C&G) and shoulder section. It was suggested, for instance, that C&G might be most appropriate at Five Oaks to lessen ROW impact (i.e., reduce the amount of ROW that must be purchased). The Bike/Ped subcommittee decided that much of the discussion related to the typical cross-section (C&G vs. shoulders) would be resolved with an environmental assessment that addresses water management issues. The subcommittee also decided to remove the bollards from the list of suggested bridge treatments. Additional issues will be addressed in the final design stage. The Bike/Ped subcommittee has recommended that the project be scheduled for final design in 2007, right-of-way (ROW) acquisition in 2008, and construction in 2009. Changes have been made in the draft report, and the TCC is asked to review the draft and forward to the TAC for final approval of the study.

The Old Durham-Chapel Hill Rd Bicycle & Pedestrian Feasibility Study is included as Attachment 9A. Attachment 9 is a memo providing background information on this item. .

Requested TCC Action: Review the Draft report and refer the TAC for final approval.

REPORTS FROM STAFF:

10. Reports from Staff
(Attachment 10)
Felix Nwoko, LPA Staff

TCC Action: Receive Report from staff

11. Report from the Chair
Mark Ahrendsen, TCC Chair

TCC Action: Receive Report from TCC Chair

12. NCDOT Report
(Attachment 12)
Jon Nance, Division 5 – NCDOT
Mike Mills, Division 7 – NCDOT

Progress Report for current Division 5 construction work is provided as Attachment 11.

TCC Action: Receive report of Division Engineers

INFORMATIONAL ITEMS

13. Recent Newspaper Articles/Legislative Update
(Attachment 13)

PENDING ITEMS

MAB Boundary/MPO Expansion
MPO Functional Classification of Streets and Roadways
Regional Priority List Ranking Methodology

Adjourn

Next meeting: February 22, 2006

TECHNICAL COORDINATING COMMITTEE

December 21, 2005

MINUTES OF MEETING

The Technical Coordinating Committee met on December 21, 2005 at 9:00 a.m. in the Council Committee Room on the second floor of Durham City Hall. The following attended:

*Mark Ahrendsen	City of Durham/Transportation (TCC Chair)
*Jamal Alavi	NCDOT/TPB
*David Bonk	Town of Chapel Hill/Planning (TCC Vice-Chair)
*Andy Henry	City of Durham/Transportation
*John Hodges-Copple	Triangle J Council of Governments (TJCOG)
*Dale McKeel	Town of Carrboro/Planning
*Jon Nance	NCDOT/Division 5 Engineer
*Felix Nwoko	City of Durham/Transportation
*Pierre Osei Owusu	City of Durham/DATA
*Tamra Shaw	NCDOT/PTD
*Scott Walston	NCDOT/TPB
*Barbara Weigel	Triangle Transit Authority
Mike Abraczinskas	NC Division of Air Quality
Ellen Beckmann	City of Durham/Transportation
Bill Bussey	Triangle Rails to Trails Conservancy
Alison Carpenter	City of Durham/Transportation
Jeremy Raw	City of Durham/Transportation
Brian Rhodes	City of Durham/Transportation
Chao Wang	City of Durham/Transportation

*Voting Members
**Alternates

Mark Ahrendsen, TCC Chair, called the meeting to order at 9:11 a.m.

Preliminaries:

Adjustments to the Agenda

There were no adjustments to the agenda.

Public Comments

Bill Bussey, Triangle Rails to Trails Conservancy, spoke regarding the American Tobacco Trail. As the American Tobacco Trail is being developed, the Conservancy would like to see a regional trails authority manage the American Tobacco Trail, as well as other trails and greenways. They feel that the ATT currently spans over eight different managing jurisdictions and if all were combined by having a regional authority to manage, maintain and plan for future connections to the ATT, the trail would benefit. Mark Ahrendsen asked if Mr. Bussey had contacted and spoken with other jurisdictions about this concern. Mr. Bussey stated that the Conservancy has not done much in this respect, but intends to focus on this issue once the trail is built.

ACTION ITEMS

Approval of November 23, 2005 TCC Meeting Minutes (Attachment 4)

A motion was made by John Hodges-Copple and seconded by Felix Nwoko to approve the November 23, 2005 TCC Meeting Minutes. The motion carried unanimously.

Motor Vehicle Emissions Budget (MVEB) (Attachments 5, 5A, 5B, 5C, 5D, and 5E)

Mark Ahrendsen provided an introduction for the Motor Vehicle Emissions Budget (MVEB) along with the attachments. There was a presentation at the November 30, 2005 Joint TAC meeting. We need to make our recommendation to DENR by January 31, 2006. This due date means that we need to decide on a recommendation today in order to forward the recommendation to the TAC at their January 11, 2006 meeting so they can take a position before the DENR due date. John Hodges-Copple provided a review of the options. He stated there were updates given to everyone this

morning. The geography for the motor vehicle emissions budget is the issue. One option is eight individual separate budgets based on the eight counties in our non-attainment area. Another option is to have a single budget for the entire eight-county region. We have also discussed one option between these two. In this option, there are two separate four-county areas that are centered on each of the main MPO's. CAMPO would have a budget area that includes all of Wake, Granville, Franklin, and Johnston Counties, and the DCHC MPO would have a budget area that includes Durham County, Orange County, Person County, and a part of Chatham County. In addition, there is another option in which the CAMPO-based counties are a single budget while the DCHC-based counties are four separate budgets.

The authority and responsibilities of the NCDOT, MPO's, and RPO's will not change according to the selected option. These agencies will still have to adopt the long-range plans, TIP's, and make a conformity determination no matter which option is selected. However, the different options will vary the requirements for cooperation and determine how budget lapses are addressed. For example, the budget area determines where growth assumptions must change in order to address a budget lapse.

On Attachment 5B, page 4, question two is an important one. If you have eight county-level budgets, the responsibility is fragmented. For example, in Durham County, only DCHC MPO is involved; in Wake County, only CAMPO is involved; in Person County, only NCDOT is involved; because Chatham County shares a budget, both DCHC and NCDOT are involved; and, in Orange County, Burlington-Graham MPO, DCHC, and NCDOT are involved. On the other hand, if you have the multi-county (MPO-centered) budgets, these responsibilities change. In this case, the DCHC MPO, the

Burlington-Graham MPO, and the NCDOT have to cooperate on all four of the counties, not just on Orange County. David Bonk asked if the inclusion of the NCDOT in this list was based on the RPO. John stated RPO's don't have any planning authority, they are advisory only. In all cases where there is a TIP conformity to be made, the NCDOT has to adopt the document and make the conformity finding. They play the MPO role in these rural places.

Mark Ahrendsen asked John to elaborate on what is meant by responsibility for meeting budgets. John identified the hypothetical case in which the TIP failed the conformity determination at the county level. If Person County exceeded the budget, the NCDOT has to address it, and the Burlington-Graham MPO and DCHC MPO has no authority to address it. However, if Orange County exceeds the budget, the DCHC MPO, Burlington-Graham MPO, and NCDOT will have to cooperate to bring the TIP into conformity. In this case, there is no clear responsible party.

What projects are affected by a conformity budget lapse? Non-exempt projects cannot proceed in the county where the budget lapse occurs or in any other non-attainment county in the same MPO. Dale McKeel asked if there was any difference between Options A and B. The big difference between Options A and B is Person County. On the CAMPO side, there is no difference between Options A and B. In the region-wide option, a conformity lapse affects everyone immediately and equally.

What projects are affected by an MPO planning lapse? The big difference between a budget lapse and a planning lapse is usually a difference between a non-exempt project and an exempt project in terms of what can move forward. David Bonk stated that there is a provision in the SIP for identifying projects that can move forward in

the event of a lapse. John stated that the State can put transportation control measures (TCMs) in the SIP that can be projects that can move forward in the event of a lapse. However, if a TCM is the SIP, the TCM must be implemented, and on-time, or there is a lapse. David Bonk stated that the MPO would like to have input in setting TCMs for the SIP. Mark Ahrendsen asked Mike Abraczinskas about the timeline for submitting SIP recommendations and Mike stated that the input must be submitted within the next two to three months. Mark Ahrendsen stated that the TCC will follow up to set a meeting.

What area must change growth, facilities or "off-budget" activities if budgets are exceeded? Under the county-level option, the changes have to affect travel within the county, or a portion of the county, where the budget is exceeded. In the two multi-county budget options, the changes would have to affect travel within the designate four-county area. In the region-wide budget, the changes are valid if they affect travel anywhere in the region.

What are the effects on the timing of decisions that the MPO's and the NCDOT must make? Under the county-level option, CAMPO and DCHC MPO could be on separate schedules because they do not share any counties. The DCHC MPO and Burlington-Graham MPO are always going to have to be on the same schedule because of Orange County. Similarly, the Chatham County rural portion is always going to have to be on the same schedule because they share rural area with the DCHC MPO. The NCDOT, based on the rural areas of Chatham and Orange Counties, will always have the same schedule as the Burlington-Graham MPO and DCHC MPO under county-level budgets for LRTP changes. On the CAMPO side, the schedule of Johnston, Granville, Franklin, and Wake Counties are always tied together. Under the multi-county budget,

the schedule issues are the same for CAMPO. For the DCHC MPO, Burlington-Graham MPO, and NCDOT, Person County would tie these agencies together. Under the region-wide budget, obviously everyone is tied together under one schedule.

What are the implications for determining and allocating Motor Vehicle Emission Budgets and for calculating motor vehicle emissions from plans and TIP's? The actual black box calculations do not change under any scenario. The only difference is how the numbers are added together to compare to a budget. Under option B, various county-level numbers are summed together to produce two totals, and under option C, all county-level numbers are summed together to form a single total. Plan analysis and model performance measures will not change. You do not lose any detail by from an eight-county budget to a region-wide budget. Felix Nwoko stated the difference is how the assessment and the comparison are done.

What are the relative risks of not meeting assigned budgets? There is no way to accurately calculate the actual risks associated with the different budget options.

What is the relative degree of coordinated decision-making required among the MPO's and NCDOT? We have already discussed this. The county-level budget requires less decision-making coordination, especially between CAMPO and DCHC MPO. The level of coordination required in the MPO-centered budget is closer to A than to C; however Person County ties the DCHC MPO, Burlington-Graham MPO, and NCDOT together. The region-wide budget ties everyone together.

What are the implications of any future changes to MPO boundaries? If the DCHC expands into Granville or CAMPO expands into Chatham, everyone would be tied together because the other MPO’s planning area already extends into that county.

Mark Ahrendsen stated that the effect would be the same as a region-wide budget. John agreed with Mark's statement in terms of the necessity to work together. However, it would not become a scenario C in terms of meeting individual budgets.

Felix Nwoko stated we need to decide which key information to present to the TAC. The issue is that we have a county by county budget now, so what are the compelling reasons to change? In making his presentation, Felix stated his preference for a county-by-county budget. He does not see a compelling reason to change, and noted that there is no air quality incentive for local governments to monitor or control their growth given a regional budget. David Bonk agrees with Felix.

John Hodges-Copple identified three remedies for conformity failure. Land use can be region-wide or area-specific. Facilities can be region-wide or area-specific. The final remedy is off-budget credits such as a TDM program. In all likelihood, a TDM or ITS program will have a regional impact. John stated he does not think any of the remedies are, by definition, only local or only regional with the exception of the off-budget remedies. He noted that the way the transportation and the air quality models treat land use is very crude, making it difficult to get local governments to implement smarter land use policies. We use rural spreadsheets in Franklin County, Person County, and part of Chatham County, and the rural spreadsheet is solely based on historical record of the VMT, not the land use and transportation model outputs. So, if the rural spreadsheet is used in Chatham County, and Chatham County chooses to build one Wal-Mart or 27 Wal-Mart's, the calculation will be exactly the same because it is based on a regression analysis of historical data. In calculating VMT, speeds, and emissions, land use is not an independent variable and is not used. The second point concerns impacts.

Changing facilities and off-budget items have a quick impact. However, land use is supposed to reflect reality and in a regional prospective you don't cut growth. The third point is that emissions are not set based on what we say right now is going to happen.

Mike Abraczinskas asked if land use in our travel demand model impacts VMT and speed information. Staff stated “yes” and Mike stated that land use is thereby an important factor. Scott Walston stated that DAQ did recommend the county-by-county budget and recent history has indicated that a planning lapse is a greater likelihood than a conformity lapse. Therefore a county-by-county budget would have the least impact on projects. He complemented John’s work in laying out the “pros” and “cons” of each option, but does not see any compelling arguments to select either option B or C.

A motion was made by Scott Walston and seconded by Barbara Weigel to offer a recommendation from the TCC to the TAC to adopt Option A, the eight separate county budgets, and to provide points for each of the different options to the TAC. John Hodges-Copple does not support the motion because he feels that Option B is better for the following reason. Based on the 2030 LRTP emission calculations, Chatham County would be about 2% of the total emissions in the MPO, and Orange, part of Chatham, and Person County would be about 10% of the total. It won't be through land use or some other factor that one of these counties exceeds their budget, rather it will simply be caused by the change in modeling tools. He believes that taking this risk is not worth the potential other benefits. By selecting the MPO-centered budget, you still keep the western part of the triangle separate from the eastern part. You do away with the concern about lapses because the same three parties; DCHC MPO, Burlington-Graham MPO, and NCDOT have to work together whether it is county-level budgets or MPO-centered

budgets. Chatham County and Person County make only a small contribution to the emissions but it would be difficult to identify remedies in those small rural areas should their budgets be exceeded. He would hate to tie our hands by going to county-level budgets. The motion passed with an 8/4 vote. Those opposing were Tamra Shaw, Andy Henry, John Hodges-Copple, and Mark Ahrendsen.

John Hodges-Copple made a substitute motion which was seconded by Tamra Shaw to offer a recommendation from the TCC to the TAC to adopt Option B, the 2 MPO-centered budgets. Felix Nwoko does not support the motion. David Bonk does not support the motion either because the county-level budgets will work better in the long run. Mark Ahrendsen stated he has the same concern as David but with the opposite perspective. Mark believes we are holding our feet to the fire because we will limit our remedies in the case of a conformity lapse. The local governments can ignore the conformity lapse issue especially if they don't have any significant TIP projects. Barbara Weigel asked John to clarify the rural county application and approach. John stated that all of Person County's emissions are calculated using the NCDOT rural spreadsheet, which does not forecast growth by location or land use. It doesn't matter what growth is planned or projected. There is no land use component in places where the rural spreadsheet is used. On the other hand, the transportation model, which provides conformity data for part of Chatham County, seems to significantly change output every time we update a model run. We end up with different levels of VMT or speed. There is much variation in the model, especially as the target area becomes smaller. This is a worry because the remedies are much more limited in the rural counties. The motion failed by a vote of 4/8. Those opposing were David Bonk, Felix Nwoko, Jon Nance,

Pierre Osei Owusu, Barbara Weigel, Dale McKeel, Jamal Alavi, and Scott Walston.

American Tobacco Trail - Phases E and F (Attachments 6, 6A, 6B, and 6C)

Mark Ahrendsen provided an introduction for the American Tobacco Trail - Phases E and F, along with the attachments. Alison Carpenter provided an update. The Bike/Ped Subcommittee met and selected Option 1 as the preferred option for Durham County and there is only one alternative for Chatham County at the moment. They are doing surveying in Chatham County and it looks like the railroad trusses might have problems, so the bridge repairs might be a little more expensive than the original estimate. The subcommittee put in a 20% contingency. Option 1 is about $6.8 million, for Durham and Chatham Counties, and $8.2 million with the 20% contingency. Assuming the 86% spending obligation, there is $4.9 million identified for this project. The Bike/Ped Subcommittee recommends that the TIP Subcommittee try to identify FY2007-2013 TIP funding to close this funding gap. David Bonk stated that the TIP Subcommittee will look at it and it could lead to allocation of funding for both Division 5 and Division 8, and in the case of Old Durham-Chapel Hill Rd Bicycle/Pedestrian Study it will be Division 5 and Division 7. He stated that his understanding is that the bike/ped program is not constrained by NCDOT divisional boundaries when they make allocations. They allocate to projects, not to NCDOT divisions. The earmark will go into a large pot of money and there will be no delineation of funds between Chatham and Durham County. Mark Ahrendsen stated that Tom Norman, NCDOT Bicycle and Pedestrian Transportation Division Director, still clearly supports an allocation of the earmark as $700,000 to Chatham and $900,000 to Durham. Mark indicated that this is not how the TCC wants to look at it based on the subcommittee recommendation. The

TCC wants to look at it as a single pot of funding. Our objective is to fund the project and then the distribution or allocation of the earmark will fall out of that. It will ultimately be a joint decision. Scott Walston stated his understanding was that it was a split funding. David Bonk stated that after the first of the year they will begin working on the 2007-2013 STIP in order to submit a draft early. The NCDOT draft is due to be released April 2006.

Bill Bussey spoke with Tom Norman this morning, and Tom mentioned that he has not been involved in this project. He is strongly urging the split between Chatham and Durham. Mr. Bussey agrees with Tom Norman. Chatham County is working on a design now and hoping to start construction in Chatham, which they are to do because Chatham County already has a lease with the Corp of Engineers and NCDOT. Durham County does not yet have a lease. Mark Ahrendsen believes the most effective next piece of this project, the one that will generate the most use, will be to connect to SouthPoint Mall, which is a major generator. If you connect to a major generator, you will have a transportation corridor. Mark hates to see us spending money on the trail in Chatham County if that money could be used to complete the link over I-40, which has a higher user base. However, this is a decision for the subcommittee and the TAC. Mr. Bussey stated a counter argument that if we do build the Chatham County portion and connect to the completed Wake County portion, the result is a completed ten-mile section. David Bonk asked whether we have heard from Cary yet. Alison stated we are sending a letter to Cary.

Old Durham-Chapel Hill Rd Bicycle/Pedestrian Feasibility Study (Attachment 6A)

Mark Ahrendsen provided an introduction for the Old Durham-Chapel Hill Rd

Bicycle/Pedestrian Feasibility Study, along with the attachments. Alison Carpenter said the subcommittee was asked to look at the timeline and the funding issues. The final design planning will be done in 2007, the right of way acquisition in 2007, and the construction in 2009. There are some questions about the cost of the environmental study and utility relocation. The project team added some costs for these items, increasing the cost by $300,000. The total cost is still unknown. David Bonk stated there are limited funds and they need to be prioritized.

Distribution Formula for FTA Section 5307 Funds

Mark Ahrendsen provided an introduction for the Distribution Formula for FTA Section 5307 Funds. David Bonk stated that the subcommittee has no recommendation at this time. They are in the process of gathering information and the subcommittee is reviewing several strategies. The good news is that the DCHC urban area will receive the second highest amount of 5307 funding in the state of North Carolina. The existing level of service is the reason. There are two new programs in the federal transportation legislation. The job access and reverse commute program is actually an existing program that has been reworked. Previously, this funding went to the State for distribution but now will go to a designated recipient in our area. Which agency will be the designated recipient is not clear at this time. The brand new program is called New Freedom. The New Freedom program is explicitly funded to allow transit providers to extend paratransit service for the disabled beyond what is required by the ADA requirements. These funds will be available to extend ADA service beyond the standard 3/4 mile service area. New Freedom will provide $75,000 in FY 2006 for our urban area. The job access reverse commute program (JARC), which is to provide service to low income individuals or

transit access to jobs in suburban areas, will provide about $150,000. There is currently a distribution formula in our area for the 5307 funding, but it is unclear how the JARC and New Freedom funds will be distributed. David Bonk also noted that the New Freedom program has requirements such as the clients must be in an approved human service program and the service contract must be competitively bid. He asked that the issue be deferred one month, for the January TCC meeting, to provide time to interpret the federal regulation. David also questioned whether the resources needed to meet the federal requirements are worth the $225,000 program revenue. Mark Ahrendsen stated that this issue needs to be brought back as quickly as possible and we should not leave any funding on the table.

Reports from Staff:

Reports from Staff (Attachment 9)

Felix Nwoko stated that a kick off meeting was held at TTA regarding the Request for Proposal for Land Use Modeling in Durham.

Report from the Chair

Mark Ahrendsen stated that he received a schedule for the development of the environmental document for the East End Connector yesterday. The environmental document will be completed in two years. There is twenty-four months of planning.

Mark stated he just received notice that the NC Turnpike Authority has started the project development, engineering, environmental studies for the Triangle Parkway. They have scheduled a scoping meeting for January 13, 2006 in the NCDOT Board Room at 10:00 a.m.

NCDOT Report:

Jon Nance, NCDOT Division 5 Engineer provided an update. On I-85, the contractor plans to open up the interchange at Duke Street by the end of the week. Dual bridges will be in operation again. The US 15-501 northbound to I-85 north should be relocated tonight after 8:00 p.m. That will coincide with the opening of the northbound exit ramp to Hillandale. As part of this, it requires the closure of the northbound collector to I-85. It will in fact end at the Hillsborough Street interchange. There will be a detour around Cole Mill Road. They are working to open the Avondale ramp northbound I-85 by the weekend. There is a press release going out on several changes regarding I-85.

Informational Items:

Recent Newspaper Articles/Legislative Update (Attachment 12)

The recent newspaper articles/legislative updates are attached.

Adjournment

There being no further business before the Technical Coordinating Committee, the committee adjourned at 11:38 a.m.

MEMORANDUM

TO: **Transportation Advisory Committee**
DCHC MPO

FROM: **DCHC MPO Lead Planning Agency**

DATE: **February 8, 2006**

SUBJECT: **2005-2006 Unified Planning Work Program (UPWP) – Amendment #1.**

This memo describes proposed Amendment #1 to the 2005-06 UPWP. The 2005-06 UPWP was approved by the TAC on April 13, 2005. The UPWP provides yearly funding allocations to support the ongoing transportation planning activities of the DCHC MPO. The UPWP must identify MPO planning tasks to be undertaken with the use of federal transportation funds, including highway and transit programs. Funds that would not be expended during the 2005-06 fiscal year must be de-obligated through an amendment in order for the funds to be available for programming during the next fiscal year (2006-07). Accordingly, the proposed amendment reflects the de-obligation of funds originally programmed for major emphasis area projects and the reallocation of funds as shown in the table below. The major emphasis projects are listed below:

- Non motorized trip model enhancement
- TRM Travel Behavior Survey
- MPO Data Automation/Integration
- Model Update
- Phase 1 Land use model integration
- Collector Street Plan
- ITS Deployment Plan Update and Evaluation

These funds will be re-programmed in the 2006-07 UPWP.

Table 1: 2005-2006 UPWP Emphasis Projects - Amendment #1

		2005-06 UPWP	Proposed Amendment	Amount De-obligated
		Federal		
1	**Bicycle and Pedestrian Trip (non-motorized) Model Enhancement**	$75,000	$0	$75,000
2	**Travel Demand Model Major Update and Enhancement**	$125,000	$30,000	$95,000
3	**Travel Behavior Survey and Travel Time/Speed Survey**	$300,000	$240,000	$60,000
4	**MPO Transportation Data Management/Automation & GIS Integration**	$250,000	$0	$250,000
5	**Land Use / Transportation/AQ Integration Model**	$250,000	$0	$250,000
6	**Collector Street Plans**	$100,000	$40,000	$60,000
7	**ITS Deployment Plan Update**	$70,000	$0	$70,000

Proposed changes to the 2005-06 UPWP are summarized as follows:

Town of Carrboro

STP-DA

A. De-obligate funds from the following tasks associated with the Major Emphasis Area Projects

II-B-1 Collection of Base Year Data
II-B-2 Collection of Network Data
II-B-3 Travel Model Update
II-B-4 Travel Surveys
III-D-3 Special Studies

B. Add STP-DA funds for Carrboro Downtown Circulation Study ($40,000, federal). These funds were originally programmed in the 2003-04 STP-DA but funds were not expended.

III-D-3 Special Studies - addition of $40,000 (federal)

PL –Section 104(f) : Reallocation of funds for the following tasks, no net change

II-A-1 Traffic Count - decrease
II-A-3 Street System Changes - decrease
II-A-5 Transit System Data - decrease
II-A-6 Dwelling Unit Changes - decrease
II-B-1 Collection of Base Year Data - decrease

II-B-5 Forecast Data to Horizon Year - decrease
II-B-6 Community Goals and Objectives - decrease
III-D-1 Transportation Enhancement Planning - decrease
III-E-1 Management and Operations - increase

Town of Chapel Hill

STP-DA
De-obligate funds from the following tasks associated with the Major Emphasis Area Projects

II-B-1 Collection of Base Year Data
II-B-2 Collection of Network Data
II-B-3 Travel Model Update
II-B-4 Travel Surveys
II-B-13 Collector Street Plan
III-D-3 Special Studies

PL –Section 104(f) : Reallocation of funds for the following tasks, no net change

II-B-3 Travel Model Update - decrease
II-B-4 Travel Surveys - decrease
II-B-7 Forecast of Future Travel - decrease
II-B-18 Air Quality Planning - decrease
III-E-1 Management and Operations - increase

City of Durham

STP-DA
A. De-obligate funds from the following tasks associated with the Major Emphasis Area Projects

II-B-1 Collection of Base Year Data
II-B-2 Collection of Network Data
II-B-3 Travel Model Update
II-B-4 Travel Surveys
II-B-13 Collector Street Plan
III-D-3 Special Studies

B. Add STP-DA funds for Walkable Communities ($13,600) and Durham Bicycle Education ($8,000). These funds were not programmed in the 2004-05 UPWP.

II-B-11 Bicycle & pedestrian Element of the LRTP - addition of $21,600 (federal)

C. Transfer of STP-DA funds from Chapel Hill and Carrboro to City of Durham for Travel Survey (Household and Travel Time surveys). The City of Durham is under contract with NCDOT/ITRE for model survey activities. The MPO programmed $300,000 for model survey efforts. These funds were distributed to the individual agencies (Durham, Chapel Hill and Carrboro) for the sole purpose of determining and requesting local matching funding through the

local budget process. Local matching funds have been secured and these funds (federal portion) need to be transferred to the LPA in order to reimburse NCDOT/ITRE (and the consultant) for survey related activities (See Table 1, No 3 above).

II-B-3 Travel Model Update - addition of $54,616 (federal), transferred from Chapel Hill and Carrboro portions of Household and Travel Time/Speed surveys.

PL –Section 104(f) : De- obligation of funds for the following tasks.

II-B-1 Collection of Base Year Data - decrease
II-B-2 Collection of Network Data – decrease
II-B-17 Congestion Management System - decrease
III-D-3 Special Studies - decrease

Orange County

STP-DA
No Change

PL –Section 104(f):
No Change

TJCOG

STP-DA
De-obligate funds from the following task associated with the Major Emphasis Area Projects

III-D-3 Special Studies

TTA
Add STP-DA funds for the MPO TDM planning, management and coordination ($85,000, federal)

II-B-17 Congestion Systems Strategies

Attachment 5A and 5B presents revisions to the STP-DA funding table to reflect these changes. Attachment 5C illustrates the proposed Amendment #1 to the 2005-06 UPWP.

PROPOSED STP-DA CHANGES FOR FY 2005-06 UPWP AMENDMENT

STP-DA		Existing		Proposed Change	
NO.		FY 2006	FY 2007	FY 2006	FY 2007
		2005-06	2006-07	2005-06	2006-07
45	Durham Bicycle Plan (2004 Allocation)	$75,000		$60,000	$15,000
49	Durham Bike Education	$48,000		$8,000	$40,000
52	Hillandale:Club to I-85 5' sidewalk on both sides -DUR	$132,387			
	Phase 1 - Planning & Design				$35,000
	Phase 1 - Construction				$97,387
55	Walkable Communities Workshop (MPO)	$13,600		$13,600	
56	Capenter Fletcher RD;Woodcroft- Alston bike impr.		$114,192		
	Phase 1 - Planning & Design				$35,000
	Phase 1 - Construction				$79,192
60	ITS Deployment Plan Update	$56,000		$0	$56,000
61	Bike/Ped (non-motorized trip) Model Development	$60,000	$140,000	$0	$200,000
62	Data automation/management/GIS	$200,000		$0	$200,000
64	Land Use/Transportation Model (Placeholder)	$200,000		$0	$200,000
65	Congestion Management System	$200,000		$150,000	$50,000
66	Chapel Hill Mobility Report Card	$100,000		$122,000	
67	Carrboro Downtown Study	$40,000		$40,000	$0
69	MPO Collector Street Plan	$80,000		$40,000	$40,000
70	Model travel behavior surveys (Household+TT/Speed)	$240,000		$240,000	$0
71	Model Enhancements and major update	$100,000	$80,000	$30,000	$150,000
	Travel Time *				
	External Stations survey				
	Special Generators				
	Commercial Vehicles				
	On Board Transit Survey				

1/19/2006

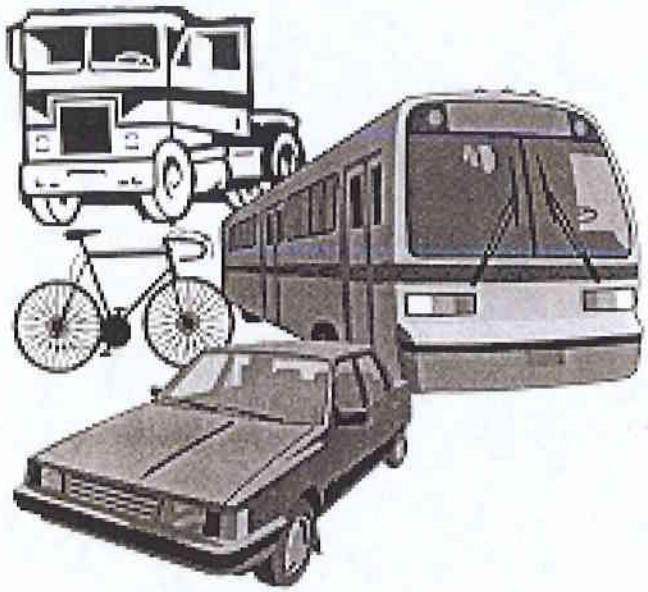
DCHC MPO -- STP-DA Allocation Table (FY 2006-2012) January 25, 2006 TCC Meeting

TCC 1/25/06 Attachment 5B

	TIP #	Location	Description	Total Cost	Prior Years	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	Non-Fed Match	Agency
			DURHAM COUNTY														
1	B-3168	Chapel Hill Rd./US 15-501	Bridge Replacement (sidewalks)	$21,536	$17,229											$4,307	Durham
2	I-306 C	I-85 C (15-501 to Broad)	Median Planters	$1,403,204	$0	$1,122,563										$280,641	Durham
3	I-306 C	I-85 C (15-501 to Broad)	Brick Betterment Noise Wall	$559,654	$0	$447,723										$111,931	Durham
4	I-306 C	I-85 C (15-501 to Broad)	Interchange Sidewalks	$93,842	$0	$75,074										$18,768	Durham
5	I-306 DB	I-85 DB (Broad to Camden)	Brick Betterment (Broad to Camden)	$1,151,952	$921,562											$230,390	Durham
6	I-306 DB	I-85 DB (Broad to Camden)	Landscaped Median Barrer (Broad to Camden)	$597,600	$478,080											$119,520	Durham
7	I-306 DB	I-85 DB (Broad to Camden)	Supplemental Sidewalks	$180,038	$144,030											$36,008	State
8	I-306 DB	I-85 DB (Broad to Camden)	Brick Betterment -- Club Blvd. E. S. Noise Wall	$133,300	$0		$106,640									$26,660	Durham
9	I-306 C	I-85 (Hillandale Commons)	Landscaping - Berm Hillandale Commons area	$40,000	$0		$20,000									$20,000	Private
10		I-85	Interchange Fencing - (Placeholder)	$75,000	$0		$60,000									$15,000	Durham
11	E-2921	American Tobacco Tr.	Phase E	$1,476,250	$0			$0	$1,181,000							$295,250	Durham
12		US 15-501	ROW Acquisition	$1,800,000	$1,440,000											$360,000	Durham
13	U-4009	US 15-501	Add left turn lane at Garrett Road intersection	$285,000	$0	$228,000										$57,000	Durham
14	U-4725	DATA (transit)	18 new buses for service expansion	$5,400,000	$0						$0	$1,352,000	$1,616,000	**$1,352,000**	**Moved 2007 to 2010**	$1,080,000	Durham
15	U-3804	Hillandale Rd	I-85 to Carver Street	$3,000,000	$0					$2,400,000						$600,000	State
16	R-2906	NC 55 Widening Project	WLK ROW/Extension	$2,700,000	$0	$2,160,000										$540,000	State
17	R-2906	NC 55 Widening Project	Sidewalks/Landscaping/Entryway Enhancements	$430,000	$0	$344,000										$86,000	State
18		Durham	Multi-modal Transit Center	$0	$0												
			ORANGE COUNTY														
19		Morgan Creek Greenway	Design Greenway Project	$89,375	$71,500											$17,875	Chapel Hill
20	U-3306	Weaver Dairy Rd.	Bike & Pedestrian Features	$707,500	$0				$0			$566,000				$141,500	Chapel Hill
21		NC 54	NC 54/Hamilton Improvements	$170,000	$136,000											$34,000	State
22		Chapel Hill Transit	Park/Ride Lot on Jones Ferry Road	$424,000	$339,200											$84,800	Chapel Hill
23		Chapel Hill Transit	Transit buses (10) Expansion	$2,800,000	$2,324,000											$560,000	Chapel Hill
24		Chapel Hill Transit	Transit buses (7) Replacement	$1,932,025	$1,547,174											$386,405	Chapel Hill
25	E-4994	Carrboro	Bolin Creek Greenway (CA)	$807,500	$0				$56,000		$590,000					$161,500	Carrboro
26		Carrboro	Morgan Creek Greenway West (CA)	$650,000	$0			$0	$40,000	$480,000						$130,000	Carrboro
27		Carrboro	Roberson Place Greenway (CA)	$57,000	$0			$45,600								$11,400	Carrboro
28		Chapel Hill	Transit Maintenance Facility	$4,788,330	$0		$560,000	$0	$1,600,000	**$1,670,664**	**2007 DATA funds transferred to Chapel Hill Transit**					$957,666	Chapel Hill
29		Chapel Hill	Bus Replacement	$1,000,000	$0		$800,000									$200,000	Chapel Hill
30		Chapel Hill/Carrboro	Morgan Creek Greenway (East)	$900,000	$0			$80,000		$640,000						$180,000	CH/Carrboro
31	E-4995	Chapel Hill	Dry Creek Greenway	$780,000	$0				$64,000		$560,000					$156,000	Chapel Hill
32		Chapel Hill	Upper Booker Creek Greenway	$800,000	$0				$0		$0	**$64,000**		**$576,000**	**Moved 2008 to**	$160,000	Chapel Hill
33		Chapel Hill-Carrboro	Signal System Improvements	$450,000	$360,000				$360,000							$90,000	
			OTHER														
34	U-4727	MPO -UPWP	MPO Planning	$4,282,500	$1,510,000	$165,000	$273,000	$273,000	$273,000	$273,000	$273,000	$273,000	$273,000			$856,500	Multiple
35			UPWP Planning $165,000		$0												
36			MPO Bike Ped Planner Position $28,000		$0												
37			TRM Service Bureau $80,000 (FY 04 - FY 08)		$0												
38	U-2807	US 15-501	MIS-Phase I	$75,000	$60,000											$15,000	Multiple
39	U-2807	US 15-501	Phase II MIS	$162,500	$130,000											$32,500	Multiple
40		Old Durham-CH Rd.	Bike Lanes	$1,500,000	$0							$1,200,000				$300,000	State
41	U-4726	MPO/Various Loval Gov't.	Urban Area Bike/Ped Allocation 1,769,524	$1,750,000	$0			$0	$0	$0	$200,000	$200,000	$200,000			$350,000	Multiple
42	U-4726A		CAR Bolin Forest Drive Sidewalk	$19,950	$0			$15,960								$3,990	Carrboro
43	U-4726B		CAR Hanna Street Sidewalk	$111,128	$0			$55,564								$55,564	Carrboro
44	U-4726C	03-04 bike allocation	Chapel Hill Sidewalks	$250,000	$0		$0		$200,000							$50,000	Chapel Hill
45	U-4726D		Bicycle Pedestrian Plan (2004 Allocation)	$93,750	$0		$0		$60,000	$15,000						$18,750	Durham
46	U-4726E	05 bike/ped allocation	CH - Airport Road	$50,000					$40,000							$10,000	Chapel Hill
47	U-4726F	05 bike/ped allocation	CH - Culbreth Rd.	$45,000					$36,000							$9,000	Chapel Hill
48	U-4726G	05 bike/ped allocation	DUR Holloway St sidewalks	$67,000					$53,600							$13,400	Durham
49	U-4726H	05 bike/ped allocation	DUR Bike Education	$60,000					$8,000	$40,000						$12,000	Durham
50	U-4726I	05 bike/ped allocation	CAR Bel Albor Path	$65,695					$52,556							$13,139	Carrboro
51	U-4726J	06 bike/ped allocation	South Greensboro St./Smith Level Sidewalk -CA	$46,000					$36,800							$9,200	
52	U-4726K	06 bike/ped allocation	Hillandale:Club to I-85 5' sidewalk on both sides -DUR	$165,484					$0	$132,387						$33,097	
53	U-4726L	06 bike/ped allocation	Fordham Blvd sidewalk NE Fordham/Estes Dr. CH	$15,000					$12,000							$3,000	
54	U-4726M	06 bike/ped allocation	Drainage gate replacement (NC 86) -CH	$10,000					$8,000							$2,000	
55	U-4726N	06 bike/ped allocation	Walkable Communities Workshop (MPO)	$17,000					$13,600							$3,400	
56	U-4726O	07 bike/ped allocation	Capenter Fletcher RD:Woodcroft- Alston bike impr.	$142,740						$114,192						$28,548	
57	U-4726P	07 bike/ped allocation	Culbreth Rd:15501-Culbreth Park Dr sidewalk	$135,000						$108,000						$27,000	
58	U-3475	MPO -UPWP sp projects	Various Planning Activities - $1,156,000		$0											$0	
59		(flexed to UPWP planning)	MPO TDM	$187,500					$85,000	$85,000						$37,500	NCDOT
60			ITS Deployment Plan Update	$70,000					$0	$56,000						$14,000	
61			Bike/Ped (non-motorized trip)Model Development	$250,000			$0	0	$0	$200,000						$50,000	MPO
62			Data automation/management/GIS	$250,000	$0			$0	$0	$200,000						$50,000	Multiple
63			I-40/NC 54 Transit Corridor -- Phase II	$250,000	$0		$0						$200,000			$50,000	Multiple
64			Land Use/Transportation Model (Placeholder)	$250,000	$0			$0	$0	$200,000						$50,000	Multiple
65			Congestion Management System	$250,000	$0			$0	$150,000	$50,000	$200,000		$200,000			$50,000	Multiple
66			Chapel Hill Mobility Report Card	$225,000	$0		$58,000		$122,000		$100,000		$100,000			$45,000	Chapel Hill
67			Carrboro Downtown Study	$50,000	$0		$0		$40,000							$10,000	Carrboro
68			Old Durham-CH Rd. bike/ped feasibility study	$62,500	$0		$0	$50,000								$12,500	Multiple
69			MPO Collector Street Plan	$100,000				$0	$40,000	$40,000						$20,000	Multiple
70			Model travel behavior surveys	$300,000				$0	$240,000							$60,000	Multiple
71			Model Enhancements and major update	$340,000				$0	$30,000	$150,000		$80,000				$68,000	
72			Durham Total	$27,296,085		$4,377,360	$186,640	$0	$2,997,000	$2,400,000	$1,352,000	$1,616,000	$1,352,000			$21,384,867	Durham Total
73			Orange Total	$17,985,528		$0	$1,360,000	$125,600	$1,760,000	$2,790,664	$1,150,000	$630,000	$0			$13,348,870	Orange Total
74			Other Total	$11,888,747		$165,000	$331,000	$394,524	$1,500,556	$1,663,579	$773,000	$1,753,000	$973,000			$3,253,659	Other Total
75			Yearly Total	#NAME?		$4,542,360	$1,877,640	$520,124	$6,617,556	$6,854,243	$3,275,000	$3,999,000	$2,325,000			$44,707,396	
76			STP DIRECT ATTRIBUTABLE			$3,000,000	$3,084,000	$3,170,352	$3,259,122	$3,350,377	$3,444,188	$3,540,625	$3,639,763	$3,741,676	$3,846,443	$45,191,417	
77			MPO Reserve			$0	$0	$0	$0	$0	$0	$300,000	$300,000	$300,000	$300,000		
78			FY BALANCE			($1,542,360)	$1,206,360	$2,650,228	($3,358,434)	($3,503,866)	$169,188	($758,375)	$1,014,763	$3,441,676	$3,546,443		
79			Uncommitted Balance			$2,464,157	$3,670,517	$6,320,745	$2,962,311	($541,555)	($372,367)	($1,130,742)	($115,979)	$3,325,697	$6,872,139		

N/A = not available

Durham-Chapel Hill-Carrboro
Metropolitan Planning Organization



2005-2006
Unified Planning Work Program (UPWP)
Amendment #1

February 8, 2006

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area
FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)
Funding Source Tables - Detail Revision Tables

Town of Chapel Hill

			Task Description	STP-DA Funds						PL : Section 104(f) Funds					
				2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
				STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
				Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II	A		**Surveillance of Change**												
II	A	1	Traffic Volume Counts	5,000	20,000	*0*	*0*	**5,000**	**20,000**	0	0	*0*	*0*	**0**	**0**
		2	Vehicle Miles of Travel	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		3	Street System Changes	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		4	Traffic Accidents	1,250	5,000	*0*	*0*	**1,250**	**5,000**	0	0	*0*	*0*	**0**	**0**
		5	Transit System Data	1,250	5,000	*0*	*0*	**1,250**	**5,000**	0	0	*0*	*0*	**0**	**0**
		6	Dwelling Unit, Pop. & Emp. Change	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		7	Air Travel	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		8	Vehicle Occupancy Rates	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		9	Travel Time Studies	1,250	5,000	*0*	*0*	**1,250**	**5,000**	0	0	*0*	*0*	**0**	**0**
		10	Mapping	1,250	5,000	*0*	*0*	**1,250**	**5,000**	2,500	10,000	*0*	*0*	**2,500**	**10,000**
		11	Central Area Parking Inventory	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		12	Bike & Ped. Facilities Inventory	1,000	4,000	*0*	*0*	**1,000**	**4,000**	0	0	*0*	*0*	**0**	**0**
		13	Bike & Ped. Counts	2,000	8,000	*0*	*0*	**2,000**	**8,000**	0	0	*0*	*0*	**0**	**0**
II	B		**Long Range Transp. Plan**												
	B	1	Collection of Base Year Data	1,693	6,770	*(1,693)*	*(6,770)*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		2	Collection of Network Data	1,693	6,770	*(1,693)*	*(6,770)*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		3	Travel Model Updates	15,234	60,934	*(15,234)*	*(60,934)*	**0**	**0**	1,250	5,000	*(269)*	*(1,074)*	**982**	**3,926**
		4	Travel Surveys	10,156	40,622	*(10,166)*	*(40,662)*	**(10)**	**(40)**	1,250	5,000	*(1,030)*	*(4,121)*	**220**	**879**
		5	Forecast of Data to Horizon year	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		6	Community Goals & Objectives	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		7	Forecast of Futurel Travel Patterns	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		8	Capacity Deficiency Analysis	2,500	10,000	*0*	*0*	**2,500**	**10,000**	0	0	*0*	*0*	**0**	**0**
		9	Highway Element of th LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		10	Transit Element of the LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		11	Bicycle & Ped. Element of the LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		12	Airport/Air Travel Element of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		13	Collector Street Element of LRTP	4,000	16,000	*(4,000)*	*(16,000)*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		14	Rail, Water or other mode of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		15	Freight Movement/Mobility Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		16	Financial Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
		17	Congestion Management Strategies	9,500	38,000	*5,500*	*22,000*	**15,000**	**60,000**	0	0	*0*	*0*	**0**	**0**
		18	Air Qual. Planning/Conformity Anal.	0	0	*0*	*0*	**0**	**0**	1,453	5,810	*(1,453)*	*(5,810)*	**0**	**0**

TCC 1/25/06 Attachment 5C

Town of Chapel Hill

Durham-Chapel Hill-Carrboro Urban Area
FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)
Funding Source Tables - Detail Revision Tables

		Task Description	STP-DA Funds						PL : Section 104(f) Funds					
			2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
			STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
			Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II	C	**Short Range Transit Planning**												
	1	Short Range Transit Planning	0	0	*0*	*0*		**0**	0	0	*0*	*0*		**0**
III-A		**Planning Work Program**	0	0	*0*	*0*	**0**	**0**	375	1,500	*0*	*0*	**375**	**1,500**
III-B		**Transp. Improvement Plan**	0	0	*0*	*0*	**0**	**0**	500	2,000	*0*	*0*	**500**	**2,000**
III-C		**Cvl Rgts. Cmp./Otr .Reg. Reqs.**												
	1	Title VI	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	2	Environmental Justice	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	3	Minority Business Enterprise	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	4	Planning for the Elderly & Disabled	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	5	Safety/Drug Control Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	6	Public Involvement	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	7	Private Sector Participation	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-D		**Incidental Plng./Project Dev.**												
	1	Transportation Enhancement Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	2	Enviro. Analysis & Pre-TIP Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	3	Special Studies	5,755	23,019	*(5,755)*	*(23,019)*	**0**	**0**	6,557	26,227	*0*	*0*	**6,557**	**26,227**
	4	Regional or Statewide Planning	0	0	*0*	*0*	**0**	**0**	1,250	5,000	*0*	*0*	**1,250**	**5,000**
III-E		**Management & Operations**												
	1	Management & Operations	0	0	*0*	*0*	**0**	**0**	5,610	22,441	*2,751*	*11,005*	**8,362**	**33,446**
Totals			$63,529	$254,115	*-$33,039*	*-$132,155*	**$30,490**	**$121,960**	$20,745	$82,978	*$0*	*$0*	**$20,745**	**$82,978**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area

FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)

Funding Source Tables - Detail Revision Tables

Town of Carrboro

	Task Description	STP-DA Funds						PL : Section 104(f) Funds					
		2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		***Proposed Amendment #1 March 8, 2006 TAC***		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		***Proposed Amendment #1 March 8, 2006 TAC***	
		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II A	**Surveillance of Change**												
II A 1	Traffic Volume Counts	0	0	*0*	*0*	**0**	**0**	120	480	*(85)*	*(339)*	**35**	**141**
2	Vehicle Miles of Travel	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Street System Changes	0	0	*0*	*0*	**0**	**0**	50	200	*(50)*	*(200)*	**0**	**0**
4	Traffic Accidents	0	0	*0*	*0*	**0**	**0**	120	480	*0*	*0*	**120**	**480**
5	Transit System Data	0	0	*0*	*0*	**0**	**0**	250	1,000	*(150)*	*(600)*	**100**	**400**
6	Dwelling Unit, Pop. & Emp. Change	0	0	*0*	*0*	**0**	**0**	120	480	*(97)*	*(386)*	**24**	**94**
7	Air Travel	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
8	Vehicle Occupancy Rates	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
9	Travel Time Studies	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
10	Mapping	0	0	*0*	*0*	**0**	**0**	60	240	*0*	*0*	**60**	**240**
11	Central Area Parking Inventory	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
12	Bike & Ped. Facilities Inventory	0	0	*0*	*0*	**0**	**0**	60	240	*0*	*0*	**60**	**240**
13	Bike & Ped. Counts	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
II B	**Long Range Transp. Plan**												
B 1	Collection of Base Year Data	583	2,332	*(583)*	*(2,332)*	**0**	**0**	250	1,000	*(192)*	*(766)*	**59**	**234**
2	Collection of Network Data	583	2,332	*(583)*	*(2,332)*	**0**	**0**	120	480	*0*	*0*	**120**	**480**
3	Travel Model Updates	5,248	20,991	*(5,248)*	*(20,991)*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
4	Travel Surveys	3,499	13,994	*(3,499)*	*(13,994)*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
5	Forecast of Data to Horizon year	0	0	*0*	*0*	**0**	**0**	400	1,600	*(250)*	*(1,000)*	**150**	**600**
6	Community Goals & Objectives	0	0	*0*	*0*	**0**	**0**	50	200	*(50)*	*(200)*	**0**	**0**
7	Forecast of Futurel Travel Patterns	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
8	Capacity Deficiency Analysis	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
9	Highway Element of th LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
10	Transit Element of the LRTP	0	0	*0*	*0*	**0**	**0**	50	200	*(50)*	*(200)*	**0**	**0**
11	Bicycle & Ped. Element of the LRTP	0	0	*0*	*0*	**0**	**0**	500	2,000	*(300)*	*(1,200)*	**200**	**800**
12	Airport/Air Travel Element of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
13	Collector Street Element of LRTP	0	0	*0*	*0*	**0**	**0**	75	300	*25*	*100*	**100**	**400**
14	Rail, Water or other mode of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
15	Freight Movement/Mobility Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
16	Financial Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
17	Congestion Management Strategies	0	0	*0*	*0*	**0**	**0**	500	2,000	*50*	*200*	**550**	**2,200**
18	Air Qual. Planning/Conformity Anal.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area
FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)
Funding Source Tables - Detail Revision Tables

Town of Carrboro

		STP-DA Funds						PL : Section 104(f) Funds					
		2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		***Proposed** Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		***Proposed** Amendment #1 March 8, 2006 TAC*	
	Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II C	**Short Range Transit Planning**												
1	Short Range Transit Planning	0	0	*0*	*0*		**0**	250	1,000	*50*	*200*		**1,200**
III-A	**Planning Work Program**	0	0	*0*	*0*	**0**	**0**	250	1,000	*0*	*0*	**250**	**1,000**
III-B	**Transp. Improvement Plan**	0	0	*0*	*0*	**0**	**0**	400	1,600	*0*	*0*	**400**	**1,600**
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**												
1	Title VI	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
2	Environmental Justice	0	0	*0*	*0*	**0**	**0**	60	240	*0*	*0*	**60**	**240**
3	Minority Business Enterprise	0	0	*0*	*0*	**0**	**0**	15	60	*0*	*0*	**15**	**60**
4	Planning for the Elderly & Disabled	0	0	*0*	*0*	**0**	**0**	50	200	*0*	*0*	**50**	**200**
5	Safety/Drug Control Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
6	Public Involvement	0	0	*0*	*0*	**0**	**0**	150	600	*0*	*0*	**150**	**600**
7	Private Sector Participation	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-D	**Incidental Plng./Project Dev.**												
1	Transportation Enhancement Plng.	0	0	*0*	*0*	**0**	**0**	100	400	*(50)*	*(200)*	**50**	**200**
2	Enviro. Analysis & Pre-TIP Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Special Studies	1,983	7,930	*8,018*	*32,070*	**10,000**	**40,000**	737	2,948	*0*	*0*	**737**	**2,948**
4	Regional or Statewide Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III- E	**Management & Operations**												
1	Management & Operations	0	0	*0*	*0*	**0**	**0**	1,045	4,178	*1,148*	*4,591*	**2,192**	**8,769**
Totals		$11,895	$47,579	*-$1,895*	*-$7,579*	**$10,000**	**$40,000**	$5,782	$23,126	*$0*	*$0*	**$5,482**	**$23,126**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area
FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)
Funding Source Tables - Detail Revision Tables

Orange County

			STP-DA Funds						PL : Section 104(f) Funds					
			2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
		Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
			Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II A		**Surveillance of Change**												
II A	1	Traffic Volume Counts	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	2	Vehicle Miles of Travel	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	3	Street System Changes	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	4	Traffic Accidents	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	5	Transit System Data	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	6	Dwelling Unit, Pop. & Emp. Change	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	7	Air Travel	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	8	Vehicle Occupancy Rates	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	9	Travel Time Studies	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	10	Mapping	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	11	Central Area Parking Inventory	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	12	Bike & Ped. Facilities Inventory	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	13	Bike & Ped. Counts	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
II B		**Long Range Transp. Plan**												
B	1	Collection of Base Year Data	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	2	Collection of Network Data	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	3	Travel Model Updates	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	4	Travel Surveys	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	5	Forecast of Data to Horizon year	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	6	Community Goals & Objectives	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	7	Forecast of Futurel Travel Patterns	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	8	Capacity Deficiency Analysis	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	9	Highway Element of th LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	10	Transit Element of the LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	11	Bicycle & Ped. Element of the LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	12	Airport/Air Travel Element of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	13	Collector Street Element of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	14	Rail, Water or other mode of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	15	Freight Movement/Mobility Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	16	Financial Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	17	Congestion Management Strategies	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	18	Air Qual. Planning/Conformity Anal.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area
FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)
Funding Source Tables - Detail Revision Tables

Orange County

		STP-DA Funds						PL : Section 104(f) Funds					
		2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
	Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II C	**Short Range Transit Planning**												
1	Short Range Transit Planning	0	0	*0*	*0*		**0**	0	0	*0*	*0*		**0**
III-A	**Planning Work Program**	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-B	**Transp. Improvement Plan**	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**												
1	Title VI	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
2	Environmental Justice	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Minority Business Enterprise	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
4	Planning for the Elderly & Disabled	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
5	Safety/Drug Control Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
6	Public Involvement	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
7	Private Sector Participation	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-D	**Incidental Plng./Project Dev.**												
1	Transportation Enhancement Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
2	Enviro. Analysis & Pre-TIP Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Special Studies	0	0	*0*	*0*	**0**	**0**	2,327	9,306	*0*	*0*	**2,327**	**9,306**
4	Regional or Statewide Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III- E	**Management & Operations**												
1	Management & Operations	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
Totals		$0	$0	*$0*	*$0*	**$0**	**$0**	$2,327	$9,306	*$0*	*$0*	**$2,327**	**$9,306**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area
FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)
Funding Source Tables - Detail Revision Tables

TJCOG

		Task Description	STP-DA Funds						PL : Section 104(f) Funds					
			2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
			STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
			Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II	A	**Surveillance of Change**												
II	A 1	Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0
	2	Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0
	3	Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0
	4	Traffic Accidents	0	0	0	0	0	0	0	0	0	0	0	0
	5	Transit System Data	0	0	0	0	0	0	0	0	0	0	0	0
	6	Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0
	7	Air Travel	0	0	0	0	0	0	0	0	0	0	0	0
	8	Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0
	9	Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0
	10	Mapping	0	0	0	0	0	0	0	0	0	0	0	0
	11	Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	12	Bike & Ped. Facilities Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	13	Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0
II	B	**Long Range Transp. Plan**												
	B 1	Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0
	2	Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0
	3	Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0
	4	Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0
	5	Forecast of Data to Horizon year	0	0	0	0	0	0	0	0	0	0	0	0
	6	Community Goals & Objectives	0	0	0	0	0	0	0	0	0	0	0	0
	7	Forecast of Futurel Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0
	8	Capacity Deficiency Analysis	0	0	0	0	0	0	0	0	0	0	0	0
	9	Highway Element of th LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	10	Transit Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	11	Bicycle & Ped. Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	12	Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	13	Collector Street Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	14	Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	15	Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0
	16	Financial Planning	0	0	0	0	0	0	0	0	0	0	0	0
	17	Congestion Management Strategies	0	0	0	0	0	0	0	0	0	0	0	0
	18	Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	0	0	0	0	0	0

TCC 1/25/06 Attachment 5C

TJCOG

Durham-Chapel Hill-Carrboro Urban Area

FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)

Funding Source Tables - Detail Revision Tables

		STP-DA Funds						PL : Section 104(f) Funds					
		2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		***Proposed** Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		***Proposed** Amendment #1 March 8, 2006 TAC*	
	Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II C	**Short Range Transit Planning**												
1	Short Range Transit Planning	0	0	*0*	*0*		**0**	0	0	*0*	*0*		**0**
III-A	**Planning Work Program**	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-B	**Transp. Improvement Plan**	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**												
1	Title VI	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
2	Environmental Justice	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Minority Business Enterprise	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
4	Planning for the Elderly & Disabled	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
5	Safety/Drug Control Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
6	Public Involvement	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
7	Private Sector Participation	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-D	**Incidental Plng./Project Dev.**												
1	Transportation Enhancement Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
2	Enviro. Analysis & Pre-TIP Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Special Studies	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
4	Regional or Statewide Planning	10,000	40,000	*(10,000)*	*(40,000)*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III- E	**Management & Operations**												
1	Management & Operations	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
Totals		$10,000	$40,000	*-$10,000*	*-$40,000*	**$0**	**$0**	$0	$0	*$0*	*$0*	**$0**	**$0**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area

FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)

Funding Source Tables - Detail Revision Tables

Durham

			STP-DA Funds						PL : Section 104(f) Funds					
			2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
		Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
			Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II	A	**Surveillance of Change**												
II	A 1	Traffic Volume Counts	6,250	25,000	*0*	*0*	**6,250**	**25,000**	0	0	*0*	*0*	**0**	**0**
	2	Vehicle Miles of Travel	0	0	*0*	*0*	**0**	**0**	250	1,000	*0*	*0*	**250**	**1,000**
	3	Street System Changes	250	1,000	*0*	*0*	**250**	**1,000**	0	0	*0*	*0*	**0**	**0**
	4	Traffic Accidents	250	1,000	*0*	*0*	**250**	**1,000**	250	1,000	*0*	*0*	**250**	**1,000**
	5	Transit System Data	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	6	Dwelling Unit, Pop. & Emp. Change	2,500	10,000	*0*	*0*	**2,500**	**10,000**	0	0	*0*	*0*	**0**	**0**
	7	Air Travel	188	750	*0*	*0*	**188**	**750**	0	0	*0*	*0*	**0**	**0**
	8	Vehicle Occupancy Rates	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	9	Travel Time Studies	3,750	15,000	*0*	*0*	**3,750**	**15,000**	0	0	*0*	*0*	**0**	**0**
	10	Mapping	875	3,500	*0*	*0*	**875**	**3,500**	0	0	*0*	*0*	**0**	**0**
	11	Central Area Parking Inventory	188	750	*0*	*0*	**188**	**750**	0	0	*0*	*0*	**0**	**0**
	12	Bike & Ped. Facilities Inventory	500	2,000	*0*	*0*	**500**	**2,000**	0	0	*0*	*0*	**0**	**0**
	13	Bike & Ped. Counts	1,250	5,000	*0*	*0*	**1,250**	**5,000**	0	0	*0*	*0*	**0**	**0**
II	B	**Long Range Transp. Plan**												
	B 1	Collection of Base Year Data	7,724	30,897	*(7,724)*	*(30,897)*	**0**	**0**	7,500	30,000	*(4,750)*	*(19,000)*	**2,750**	**11,000**
	2	Collection of Network Data	7,724	30,897	*(7,724)*	*(30,897)*	**0**	**0**	4,500	18,000	*(2,500)*	*(10,000)*	**2,000**	**8,000**
	3	Travel Model Updates	89,519	358,075	*(62,019)*	***(248,075)***	**27,500**	**110,000**	7,500	30,000	*0*	*0*	**7,500**	**30,000**
	4	Travel Surveys	46,346	185,383	*13,654*	*54,616*	**60,000**	**239,999**	0	0	*0*	*0*	**0**	**0**
	5	Forecast of Data to Horizon year	7,500	30,000	*0*	*0*	**7,500**	**30,000**	0	0	*0*	*0*	**0**	**0**
	6	Community Goals & Objectives	0	0	*0*	*0*	**0**	**0**	2,500	10,000	*0*	*0*	**2,500**	**10,000**
	7	Forecast of Futurel Travel Patterns	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	8	Capacity Deficiency Analysis	0	0	*0*	*0*	**0**	**0**	2,500	10,000	*0*	*0*	**2,500**	**10,000**
	9	Highway Element of th LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	10	Transit Element of the LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	11	Bicycle & Ped. Element of the LRTP	22,000	88,000	*5,400*	***21,600***	**27,400**	**109,600**	0	0	*0*	*0*	**0**	**0**
	12	Airport/Air Travel Element of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	13	Collector Street Element of LRTP	16,000	64,000	*(6,000)*	*(24,000)*	**10,000**	**40,000**	0	0	*0*	*0*	**0**	**0**
	14	Rail, Water or other mode of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	15	Freight Movement/Mobility Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
	16	Financial Planning	0	0	*0*	*0*	**0**	**0**	750	3,000	*0*	*0*	**750**	**3,000**
	17	Congestion Management Strategies	34,500	138,000	*(12,500)*	*(50,000)*	**22,000**	**88,000**	18,750	75,000	*(15,000)*	*(60,000)*	**3,750**	**15,000**
	18	Air Qual. Planning/Conformity Anal.	0	0	*0*	*0*	**0**	**0**	2,000	8,000	*0*	*0*	**2,000**	**8,000**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area
FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)
Funding Source Tables - Detail Revision Tables

Durham

		STP-DA Funds						PL : Section 104(f) Funds					
		2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
	Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II C	**Short Range Transit Planning**												
1	Short Range Transit Planning	0	0	*0*	*0*		**0**	0	0	*0*	*0*		**0**
III-A	**Planning Work Program**	0	0	*0*	*0*	**0**	**0**	2,500	10,000	*0*	*0*	**2,500**	**10,000**
III-B	**Transp. Improvement Plan**	0	0	*0*	*0*	**0**	**0**	5,000	20,000	*0*	*0*	**5,000**	**20,000**
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**												
1	Title VI	0	0	*0*	*0*	**0**	**0**	500	2,000	*0*	*0*	**500**	**2,000**
2	Environmental Justice	0	0	*0*	*0*	**0**	**0**	638	2,550	*0*	*0*	**638**	**2,550**
3	Minority Business Enterprise	0	0	*0*	*0*	**0**	**0**	250	1,000	*0*	*0*	**250**	**1,000**
4	Planning for the Elderly & Disabled	0	0	*0*	*0*	**0**	**0**	250	1,000	*0*	*0*	**250**	**1,000**
5	Safety/Drug Control Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
6	Public Involvement	0	0	*0*	*0*	**0**	**0**	4,665	18,661	*0*	*0*	**4,665**	**18,661**
7	Private Sector Participation	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-D	**Incidental Plng./Project Dev.**												
1	Transportation Enhancement Plng.	0	0	*0*	*0*	**0**	**0**	250	1,000	*0*	*0*	**250**	**1,000**
2	Enviro. Analysis & Pre-TIP Plng.	750	3,000	*0*	*0*	**750**	**3,000**	2,500	10,000	*0*	*0*	**2,500**	**10,000**
3	Special Studies	31,263	125,051	*(26,263)*	*(105,050)*	**5,000**	**20,001**	11,500	46,000	*(2,750)*	*(11,000)*	**8,750**	**35,000**
4	Regional or Statewide Planning	2,500	10,000	*0*	*0*	**2,500**	**10,000**	4,500	18,000	*0*	*0*	**4,500**	**18,000**
III- E	**Management & Operations**												
1	Management & Operations	25,000	100,000	*0*	*0*	**25,000**	**100,000**	17,726	70,904	*0*	*0*	**17,726**	**70,904**
Totals		$306,826	$1,227,303	*-$103,176*	*-$412,703*	**$203,650**	**$814,600**	$96,779	$387,115	*-$25,000*	*-$100,000*	**$71,779**	**$287,115**

TCC 1/25/06 Attachment 5C

TTA

Durham-Chapel Hill-Carrboro Urban Area

FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)

Funding Source Tables - Detail Revision Tables

		STP-DA Funds						PL : Section 104(f) Funds					
		2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
	Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II A	**Surveillance of Change**												
II A 1	Traffic Volume Counts	0	0	*0*	*0*	**0**	**0**	0	0	0	0	**0**	**0**
2	Vehicle Miles of Travel	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Street System Changes	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
4	Traffic Accidents	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
5	Transit System Data	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
6	Dwelling Unit, Pop. & Emp. Change	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
7	Air Travel	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
8	Vehicle Occupancy Rates	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
9	Travel Time Studies	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
10	Mapping	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
11	Central Area Parking Inventory	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
12	Bike & Ped. Facilities Inventory	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
13	Bike & Ped. Counts	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
II B	**Long Range Transp. Plan**												
B 1	Collection of Base Year Data	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
2	Collection of Network Data	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Travel Model Updates	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
4	Travel Surveys	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
5	Forecast of Data to Horizon year	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
6	Community Goals & Objectives	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
7	Forecast of Futurel Travel Patterns	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
8	Capacity Deficiency Analysis	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
9	Highway Element of th LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
10	Transit Element of the LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
11	Bicycle & Ped. Element of the LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
12	Airport/Air Travel Element of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
13	Collector Street Element of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
14	Rail, Water or other mode of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
15	Freight Movement/Mobility Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
16	Financial Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
17	Congestion Management Strategies	0	0	*21,250*	*85,000*	**21,250**	**85,000**	0	0	*0*	*0*	**0**	**0**
18	Air Qual. Planning/Conformity Anal.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**

TCC 1/25/06 Attachment 5C

II C	**Short Range Transit Planning**												
1	Short Range Transit Planning	0	0	*0*	*0*		**0**	0	0	*0*	*0*		**0**
III-A	**Planning Work Program**	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-B	**Transp. Improvement Plan**	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**												
1	Title VI	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
2	Environmental Justice	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Minority Business Enterprise	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
4	Planning for the Elderly & Disabled	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
5	Safety/Drug Control Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
6	Public Involvement	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
7	Private Sector Participation	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-D	**Incidental Plng./Project Dev.**												
1	Transportation Enhancement Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
2	Enviro. Analysis & Pre-TIP Plng.	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
3	Special Studies	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
4	Regional or Statewide Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III- E	**Management & Operations**												
1	Management & Operations	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
Totals		$0	$0	*$21,250*	*$85,000*	**$21,250**	**$85,000**	$0	$0	*$0*	*$0*	**$0**	**$0**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area

FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)

Funding Source Tables - Detail Revision Tables

Total MPO PL/STP-DA Funds

		STP-DA Funds						PL : Section 104(f) Funds					
		2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
	Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
II A	**Surveillance of Change**												
II A 1	Traffic Volume Counts	11,250	45,000	*0*	*0*	**11,250**	**45,000**	120	480	*(85)*	*(339)*	**35**	**141**
2	Vehicle Miles of Travel	0	0	*0*	*0*	**0**	**0**	250	1,000	*0*	*0*	**250**	**1,000**
3	Street System Changes	250	1,000	*0*	*0*	**250**	**1,000**	50	200	*(50)*	*(200)*	**0**	**0**
4	Traffic Accidents	1,500	6,000	*0*	*0*	**1,500**	**6,000**	370	1,480	*0*	*0*	**370**	**1,480**
5	Transit System Data	1,250	5,000	*0*	*0*	**1,250**	**5,000**	250	1,000	*(150)*	*(600)*	**100**	**400**
6	Dwelling Unit, Pop. & Emp. Change	2,500	10,000	*0*	*0*	**2,500**	**10,000**	120	480	*(97)*	*(386)*	**24**	**94**
7	Air Travel	188	750	*0*	*0*	**188**	**750**	0	0	*0*	*0*	**0**	**0**
8	Vehicle Occupancy Rates	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
9	Travel Time Studies	5,000	20,000	*0*	*0*	**5,000**	**20,000**	0	0	*0*	*0*	**0**	**0**
10	Mapping	2,125	8,500	*0*	*0*	**2,125**	**8,500**	2,560	10,240	*0*	*0*	**2,560**	**10,240**
11	Central Area Parking Inventory	188	750	*0*	*0*	**188**	**750**	0	0	*0*	*0*	**0**	**0**
12	Bike & Ped. Facilities Inventory	1,500	6,000	*0*	*0*	**1,500**	**6,000**	60	240	*0*	*0*	**60**	**240**
13	Bike & Ped. Counts	3,250	13,000	*0*	*0*	**3,250**	**13,000**	0	0	*0*	*0*	**0**	**0**
II B	**Long Range Transp. Plan**												
B 1	Collection of Base Year Data	10,000	39,999	*(10,000)*	*(39,999)*	**0**	**0**	7,750	31,000	*(4,942)*	*(19,766)*	**2,809**	**11,234**
2	Collection of Network Data	10,000	39,999	*(10,000)*	*(39,999)*	**0**	**0**	4,620	18,480	*(2,620)*	*(10,480)*	**2,000**	**8,000**
3	Travel Model Updates	110,000	440,000	*(82,500)*	*(330,000)*	**27,500**	**110,000**	8,750	35,000	*(269)*	*(1,074)*	**8,482**	**33,926**
4	Travel Surveys	60,000	239,999	*(10)*	*(40)*	**59,990**	**239,959**	1,250	5,000	*(1,030)*	*(4,121)*	**220**	**879**
5	Forecast of Data to Horizon year	7,500	30,000	*0*	*0*	**7,500**	**30,000**	400	1,600	*(400)*	*(1,600)*	**0**	**0**
6	Community Goals & Objectives	0	0	*0*	*0*	**0**	**0**	2,550	10,200	*(50)*	*(200)*	**2,500**	**10,000**
7	Forecast of Futurel Travel Patterns	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
8	Capacity Deficiency Analysis	2,500	10,000	*0*	*0*	**2,500**	**10,000**	2,500	10,000	*0*	*0*	**2,500**	**10,000**
9	Highway Element of th LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
10	Transit Element of the LRTP	0	0	*0*	*0*	**0**	**0**	50	200	*(50)*	*(200)*	**0**	**0**
11	Bicycle & Ped. Element of the LRTP	22,000	88,000	*0*	*0*	**22,000**	**88,000**	500	2,000	*(300)*	*(1,200)*	**200**	**800**
12	Airport/Air Travel Element of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
13	Collector Street Element of LRTP	20,000	80,000	*(10,000)*	*(40,000)*	**10,000**	**40,000**	75	300	*25*	*100*	**100**	**400**
14	Rail, Water or other mode of LRTP	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
15	Freight Movement/Mobility Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
16	Financial Planning	0	0	*0*	*0*	**0**	**0**	750	3,000	*0*	*0*	**750**	**3,000**
17	Congestion Management Strategies	44,000	176,000	*14,250*	*57,000*	**58,250**	**233,000**	19,250	77,000	*(14,950)*	*(59,800)*	**4,300**	**17,200**
18	Air Qual. Planning/Conformity Anal.	0	0	*0*	*0*	**0**	**0**	3,453	13,810	*(1,453)*	*(5,810)*	**2,000**	**8,000**
II C	**Short Range Transit Planning**												
1	Short Range Transit Planning	0	0	*0*	*0*	**0**	**0**	250	1,000	*50*	*200*		**1,200**

TCC 1/25/06 Attachment 5C

Durham-Chapel Hill-Carrboro Urban Area

FY 2005-2006 Unified Planning Work Program - Amendment #1 (TAC 3/8/06)

Funding Source Tables - Detail Revision Tables

Total MPO PL/STP-DA Funds

		STP-DA Funds						PL : Section 104(f) Funds					
		2005-06 UPWP 4/13/2005 TAC		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*		*2005-06 UPWP 4/13/2005 TAC*		*Increase/(Decrease) Changes*		*Proposed Amendment #1 March 8, 2006 TAC*	
	Task Description	STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		STP-DA 133(b)(3)(7)		Section 104(f) PL		Section 104(f) PL		Section 104(f) PL	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
III-A	**Planning Work Program**	0	0	*0*	*0*	**0**	**0**	3,125	12,500	*0*	*0*	**3,125**	**12,500**
III-B	**Transp. Improvement Plan**	0	0	*0*	*0*	**0**	**0**	5,900	23,600	*0*	*0*	**5,900**	**23,600**
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**												
1	Title VI	0	0	*0*	*0*	**0**	**0**	500	2,000	*0*	*0*	**500**	**2,000**
2	Environmental Justice	0	0	*0*	*0*	**0**	**0**	698	2,790	*0*	*0*	**698**	**2,790**
3	Minority Business Enterprise	0	0	*0*	*0*	**0**	**0**	265	1,060	*0*	*0*	**265**	**1,060**
4	Planning for the Elderly & Disabled	0	0	*0*	*0*	**0**	**0**	300	1,200	*0*	*0*	**300**	**1,200**
5	Safety/Drug Control Planning	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
6	Public Involvement	0	0	*0*	*0*	**0**	**0**	4,815	19,261	*0*	*0*	**4,815**	**19,261**
7	Private Sector Participation	0	0	*0*	*0*	**0**	**0**	0	0	*0*	*0*	**0**	**0**
III-D	**Incidental Plng./Project Dev.**												
1	Transportation Enhancement Plng.	0	0	*0*	*0*	**0**	**0**	350	1,400	*(50)*	*(200)*	**300**	**1,200**
2	Enviro. Analysis & Pre-TIP Plng.	750	3,000	*0*	*0*	**750**	**3,000**	2,500	10,000	*0*	*0*	**2,500**	**10,000**
3	Special Studies	39,000	156,000	*(24,000)*	*(95,999)*	**15,000**	**60,001**	21,120	84,481	*(2,750)*	*(11,000)*	**18,370**	**73,481**
4	Regional or Statewide Planning	12,500	50,000	*(10,000)*	*(40,000)*	**2,500**	**10,000**	5,750	23,000	*0*	*0*	**5,750**	**23,000**
III- E	**Management & Operations**												
1	Management & Operations	25,000	100,000	*0*	*0*	**25,000**	**100,000**	24,381	97,523	*4,169*	*16,676*	**28,550**	**114,199**
Totals		$392,249	$1,568,997	*-$132,259*	*-$529,037*	**$259,990**	**$1,039,960**	$125,631	$502,525	*-$25,000*	*-$100,000*	**$100,331**	**$402,525**

2006-2007 UNIFIED PLANNING WORK PROGRAM (UPWP) DEVELOPMENT SCHEDULE

2006

			January				February				March				April				May				June			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
2	25-Jan-06	TCC initiates the development of the 2006-2007 UPWP																								
3	Feb-06	NCDOT -PTD Transmitts Transit UPWP materials and schedule to transit operators																								
4	8-Feb-06	TAC receives schedule for the development of the 2006-2007 UPWP. TAC receives update on Section 5307 distribution between TTA, DATA and CHT																								
5	Feb-06	NCDOT transmits FHWA and FTA planning funds to the MPO and transit operators																								
6	February-March	Development of Draft 2006-07 UPWP																								
	February-March	TCC coordinates with member jurisdictions budget process for local matching funds																								
8	22-Mar-06	TCC recommends Draft 2006-2007 UPWP for TAC approval																								
9	12-Apr-06	TAC receives Draft 2006-2007 UPWP and considers approval																								
10	10-May-06	TAC adopts 2006-2007 UPWP and self certifies MPO planning process																								
11	Jun-06	NCDOT/FHWA approves 2006-2007 UPWP																								

MEMORANDUM

TO: DCHC MPO Transportation Coordinating Committee

FROM: DATA

SUBJECT: 5307 Apportionment

DATE: January 25, 2006

Last year, in response to concerns expressed by some DCHC elected representatives, the TAC asked the three transit systems in the DCHC area to review the 5307 funding allocation formula in order to determine if the formula is fair and equitable, and if not, to come up with a new allocation methodology acceptable to all three systems.

In response to the directive, DATA, TTA and CHT staff met on three separate occasions and thoroughly examined the allocation formula including the rationale behind it. The current formula reflects the federal formula used to apportion Section 5307 funds to MPOs throughout the nation. The only divergence from the federal formula is that the funds generated by variables for regional population and population density are all allocated between DATA and CHT. TTA is not eligible to receive a share of those funds under the current MPO formula. TTA also caps its share of the revenue based on the passenger miles variable so that the DATA and CHT apportionments are not reduced.

TTA and DATA agree that the current formula provides a fair and equitable method of distributing Section 5307 funds within the MPO and recommend maintaining it. CHT disagrees, and is proposing instead to change the **passenger miles** indicator to a **passengers carried** indicator. For the reasons denoted below, DATA and TTA do not agree with CHT that this change would be a better reflection of MPO goals and objectives than the current formula.

Passenger miles is the best indicator of effectiveness. For example, 10 people traveling 20 miles in a bus (200 passenger miles) is more effective than even 15 people traveling 10 miles in a bus (150 passenger miles). If however, the **passengers carried** indicator is used, this less effective performance (15 people traveling 10 miles in a bus) would erroneously be considered the more effective performance. And while CHT has argued that the rationale stated herein does not take into account “cold starts”, neither DATA nor TTA believe that the difference in the number of **passengers carried** would equal a one-for-one difference in “cold starts.” Furthermore, the actual difference in cold starts can not be measured any more accurately than the pollution created by a single occupant

vehicle (idling at a stop light or stuck in traffic) can be measured; or at least CHT has not provided any such comparisons.

The TCC is therefore requested to discuss this issue, approve the conclusion reached by DATA and TTA and forward it for further consideration and approval by TAC in their February meeting.

MEMORANDUM

TO: Transportation Coordinating Committee (TCC)
DCHC MPO

FROM: DCHC Lead Planning Agency Staff

DATE: January 25, 2006

RE: American Tobacco Trail, Phases E - F

On August 10, 2005, the SAFETEA-LU federal transportation bill was signed into law, guaranteeing over $408 million in congressional earmarks for projects throughout the state of North Carolina. Among other earmark funding, Representative David Price secured $1.6 million for the American Tobacco Trail (ATT) in Durham and Chatham Counties, as well as $1.6 million for general bicycle and pedestrian projects. Both earmarks are subject to an 86% obligation limitation.

The $1.6 million secured by Rep. Price for the American Tobacco Trail is to be used for the completion of Phase E (TIP project E-2921E) in Durham and Phase F (E-2921F) in Chatham. Phase E includes the construction of a bicycle/pedestrian bridge over I-40 and completion of approximately 4 miles of trail in Durham County from NC 54 to the Chatham County line. Phase F includes the decking of two bridges and completion of approximately 4.7 miles of trail in Chatham County from the Durham to Wake County lines.

The NCDOT Bicycle & Pedestrian Division administers the federal earmark funding, and has suggested that the $1.6 million in earmark funds be split between Durham and Chatham Counties, so that Durham receives $900,000 and Chatham receives $700,000. The TCC/TAC is being presented with the funding status and projected costs of the ATT Phase E and Phase F projects for informational purposes, and to offer comments to the local governments and NCDOT Bicycle & Pedestrian Division regarding the allocation of resources within the Durham-Chapel Hill-Carrboro metropolitan area to complete the American Tobacco Trail.

Background

In 2003, Durham City/County secured $1,476,250 in STP-DA funding and local match for the ATT Phase E project. The FHWA contributed $992,000 through federal earmark funding in 2004 for the ATT, which was split evenly between Durham and Chatham Counties, giving each $496,000 in federal funding. The City of Durham prepared an interlocal agreement with the State in 2004 for TIP project E-2921E, but the agreement was never released by NCDOT for final execution. In 2005, the City and County of Durham sought through Representative David Price's office federal earmark funding of $2 million to help complete the ATT. SAFETEA-LU included a $1.6 million federal earmark for this project.

The NCDOT Bicycle & Pedestrian Division has been active in securing funds for the Chatham County portion of the ATT (E-2921F) since 2004, when a federal earmark and State allocation provided funds for the project. The FHWA contributed $992,000 through federal earmark funding in 2004 for the ATT, which was split evenly between Durham and Chatham Counties, giving Chatham County $496,000 in federal funding. The NCDOT Bicycle & Pedestrian Division awarded $900,000 in State funds toward the Chatham portion of the ATT. Chatham County has not yet prepared an interlocal agreement with the State for completion of Phase F and has not completed planning and design for the trail. According to NCDOT plans, the Chatham County Phase F section will include decking two railroad trusses and finishing four miles of trail with a 10' paved cross-section for bikes/pedestrians and a 5' unpaved section for equestrian users.

Funding Status

Questions for consideration include how to divide a recent $1,600,000 federal earmark for the ATT between Durham and Chatham Counties, as well as the identification of additional revenue sources if needed to complete the project. Additional funding would provide for a "signature" bridge over I-40. Funding currently committed to the American Tobacco Trail in Durham and Chatham Counties is identified below:

ATT Phase E (Durham County)

$496,000	2004 FHWA earmark
$1,181,000	STP/DA allocation
$295,250	City match for STP/DA funds
$100,000	Scott King Rd. trailhead (Payment-in lieu funds)
$2,072,000	

ATT Phase F (Chatham County):

$496,000	2004 FHWA earmark
$900,000	2004 NCDOT Bicycle and Pedestrian award
$1,396,000	

Not Designated

$1,376,000	SAFETEA-LU Earmark (with 86% obligation limitation)

Construction Costs

Cost estimates for ATT Phases E and F are displayed in the following table. Multiple options are offered for Phase E, which demonstrate the cost differences between a basic bridge over I-40 and limited paving of the trail and a "signature" bridge over I-40 and full paving of the trail. The "signature" bridge over I-40 would provide a "gateway" effect and add visibility to the trail for motorists on I-40. The "off the rack" bridge would most likely be prefabricated and undistinguished in its design.

Cost estimates for ATT Phase F includes a paved trail surface and decking of two existing railroad trusses over two creeks which are tributaries into Jordan Lake.

	Bridge	"Soft" Costs	Trail	Estimated Cost	Programmed Funding	Current Shortfall
Durham County (Phase E)	**I-40 bridge (approx 400 ft)**	**35% bridge cost**	**4.0 miles**			
Option 1 – "signature" bridge + 4.0 miles paved trail	$1,680,000	$588,000	$2,323,200	$4,591,200	$2,072,000	$2,519,200
Option 1A – "signature" bridge + 3.0 miles paved and 1.0 miles unpaved trail	$1,680,000	$588,000	$2,059,200	$4,327,200	$2,072,000	$2,255,200
Option 2 – "signature" bridge + 1.7 miles paved, 2.3 miles improved but unpaved	$1,680,000	$588,000	$1,753,430	$4,021,430	$2,072,000	$1,949,430
Option 3 – "off the rack" bridge + 4.0 miles paved trail	$1,315,200	$460,320	$2,323,200	$4,098,720	$2,072,000	$2,026,720
Option 3A – "off the rack" bridge + 3.0 miles paved and 1.0 miles unpaved trail	$1,315,200	$460,320	$2,059,200	$3,834,720	$2,072,000	$1,762,720
Option 4 – "off the rack" bridge + 1.7 miles paved, 2.3 miles improved but unpaved	$1,315,200	$460,320	$1,753,430	$3,528,950	$2,072,000	$1,456,950
Chatham County (Phase F)	**Two bridges**	**Unknown**	**4.7 miles**			
Paved trail with additional equestrian trail	$456,000	Unknown	$1,881,039	$2,337,039	$1,396,000	$941,039

"Soft costs" account for additional expenditures for design, construction administration and miscellaneous tasks such as soil boring, surveying, plan approvals, and traffic control. This cost varies depending on the final bridge cost, and is estimated at 35% of the total bridge cost.

- Trail estimates are based on the following per-unit costs:
  - $110/LF for paved trail
  - $60/LF for improved, unpaved trail
- Bridge estimates are based on the following per-unit costs:
  - $350/sq ft for "signature" bridge
  - $274/sq ft for "off the rack" bridge

TCC Subcommittee Review

The TCC discussed this matter at their October meeting and referred the item to the Bicycle and Pedestrian subcommittee for a recommendation on the scope of the ATT project in Durham and Chatham Counties and a proposal to fully-fund the completion of the ATT in Durham and Chatham Counties (including the distribution of the $1.6 million

federal earmark). The Bike/Ped subcommittee has recommended that Option 1 be selected as the optimal scenario for the Phase E portion of the trail, and also recommended that a 20% contingency be added to the final cost estimate, in order to account for unanticipated cost increases and/or construction administration costs. With the selection of these Options, in addition to the contingency, the total cost estimate for Phases E & F is $8.28 million. The Bike/Ped subcommittee agreed that if full funding for this amount cannot be secured, that the bridges should be constructed prior to any trail enhancements.

The Bike/Ped subcommittee referred the ATT item to the TIP/STP-DA subcommittee for a recommendation on funding the project in the 2007-2013 TIP. The TIP subcommittee met on January 18 and decided to delay a funding recommendation until April 2006 when a draft of the 2007-2013 STIP is released. In the meantime, the TIP subcommittee recommended sending a letter to NCDOT requesting that the 2005 SAFETEA-LU earmark be dedicated to the project as a whole. The TIP subcommittee wants the project fully funded and does not want the two phases to compete against each other for funding. The TIP subcommittee also requested that the funding information be shared with the TAC.

TCC Bike/Ped Meeting Agenda

Durham City Hall, Transportation Conference Room
November 14, 2005 – 9:00AM

In Attendance: Dale McKeel, Carrboro
Bill Bussey, Triangle Rails-to-Trails
Felix Nwoko, DCHC MPO
Jeremy Raw, DCHC MPO
Jason Sullivan, Chatham County
John Tallmadge, TTA
Alison Carpenter, DCHC MPO

1) Introductions & Local Updates

Local updates were skipped.

2) Bike/Ped Subcommittee Structure

- Committee membership
- Election of officers

Elections were tabled until next meeting with higher attendance. Alison Carpenter is the LPA staff liaison to the committee; Jeremy Raw is back-up LPA staff. Anyone with questions or concerns regarding committee membership should contact Alison or Jeremy.

3) TCC/TAC Action Items

i. *Old Durham-Chapel Hill Rd* – the TCC and its subcommittee was directed by the TAC at their 11/09/05 meeting to make recommendations for full funding of the Old D-CH Rd improvements from Sage Rd to Garrett Rd. The subcommittee discussed the preference for funding the project through the 2007-2013 TIP using STP funds, pushing out the timeline on other (highway) projects from Div 5 & 7, in order to create $1 million to cover the current funding discrepancy.

Other funding options discussed include STP-DA, Safe Routes to School and/or discretionary funding for bike/ped, allocated by

NCDOT Board members. Dale suggested that the TCC also look into the discrepancies between the federal register and the amount of STP-DA actually received by DCHC through NCDOT, as it may decrease the STP-DA deficit. It was suggested that SR2S funds were not a dependable source, but may be a supplementary source for later work.

The committee decided to recommend that the project be scheduled earlier than 2009, for design and right-of-way acquisition.

The commission also discussed the "Remaining Issues" section of the report. It was decided that the report should recommend a combination of curb-and-gutter (C&G) and shoulder section. It was suggested, for instance, that C&G might be most appropriate at Five Oaks to lessen ROW impact. The subcommittee decided that much of the discussion related to C&G vs. shoulders would be resolved with the environmental assessment dealing with water management issues. The committee also decided to remove the bollards from the list of suggested bridge treatments. Additional issues will be addressed in final design stage.

Felix suggested that the TCC and TAC be provided information on past and present LRTP funding commitments for bike/ped projects, when presented with options for Old D-CH Rd project funding.

It was also suggested by subcommittee members that design and project management be included in the cost estimate, but that the MPO would assume NCDOT project management if it is a TIP project.

ii. *American Tobacco Trail* – the TAC, at their 11/09/05 meeting, directed the TCC and its subcommittee to recommend a funding plan for the ATT, phases E and F. The subcommittee discussed the need to view the two projects as one MPO project and look at the overall funding outlook. According to NCDOT, the $1.6 million earmark is included in the equity formula for the State, and may be restricted at 86% obligation. Also, there are some questions regarding availability of earmark funds after Katrina emergency spending.

The combined project cost for ATT phases E & F will be approximately $6.5 million. There is currently @ $3.3 million from

previously identified funding sources, plus a minimum of $1.2 million in 2005 federal earmarks. The subcommittee decided to recommend that phases E-F be funded as a TIP project – again, a project would need to be bumped to fund the $2 million funding discrepancy.

The subcommittee discussed local funding contributions, and it was decided that the TCC should recommend to the TAC to send a letter to CAMPO and Cary requesting local participation on the ATT. A draft letter will be provided to the TAC in their December agenda packet. Jason asked that Chatham County be given a courtesy review prior to the transmittal of such letter.

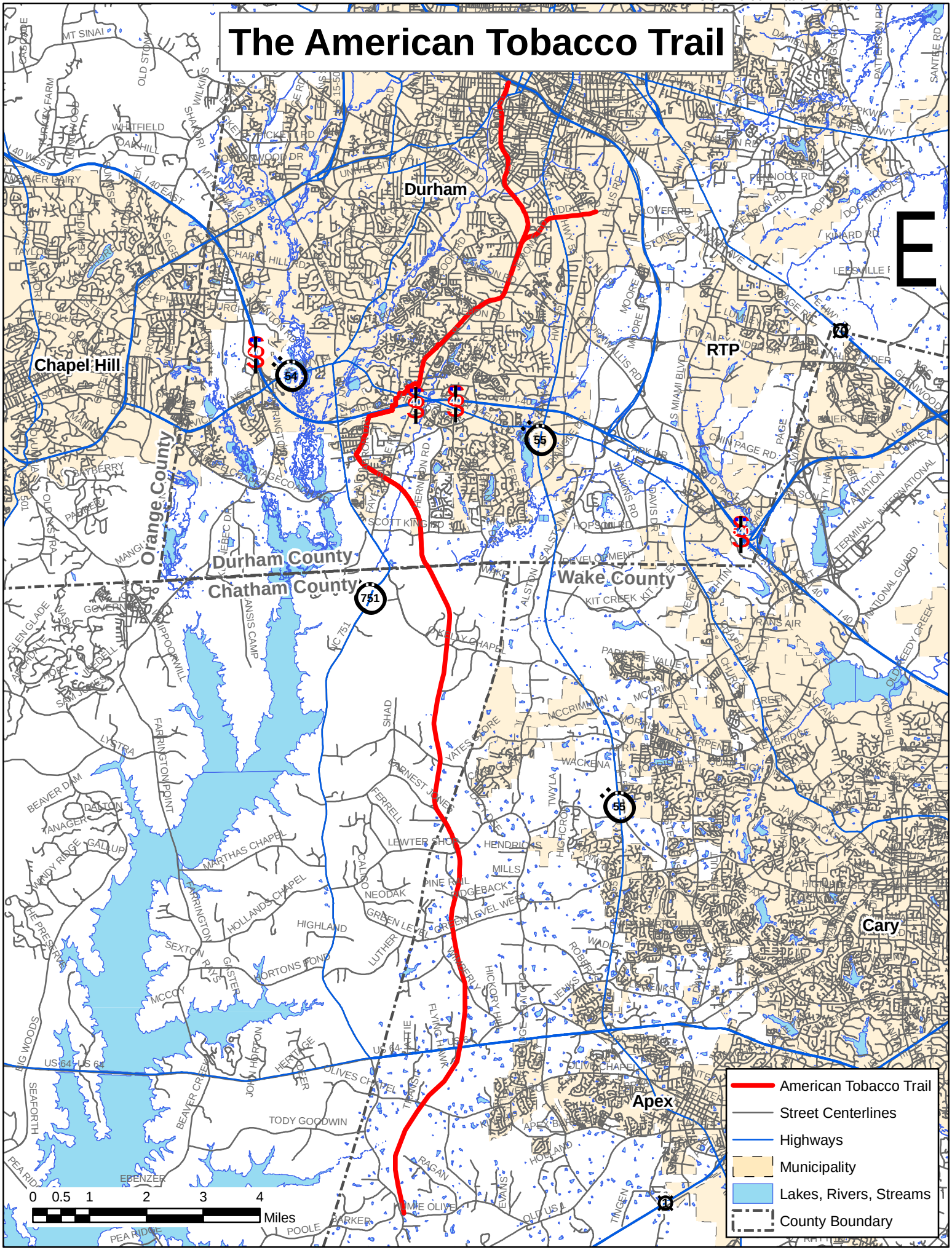
Bill Bussey suggested that the only necessary parts for a "first phase" would be the I-40 bridge in Durham and two bridges in Chatham, as well as fencing at Corps land. He suggested that non-improvement of the trail in Chatham may be an option to decrease costs, although there are some issues with transportation use on the trail in its current state.

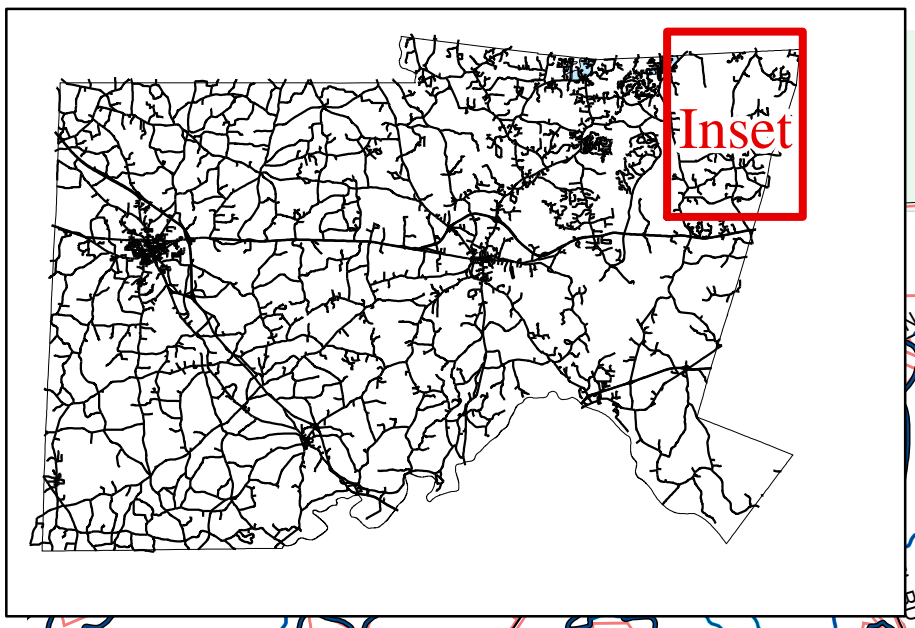
The subcommittee will gather specific information on the federal earmark and discuss further with the TCC, before presenting a recommendation to the TAC.

4) Regional Coordination

- CORE Bike/Ped/Greenspace Plan – Per the direction of the TAC at their 10/14/05 meeting, the MPO sent a letter to local jurisdictions informing them of the CORE Plan, and options to adopt the plan locally or use as an "inter-jurisdictional guide"

- MPO Bike/Ped Newsletter – another newsletter is planned for Spring 2006. Work will began in late winter.


The American Tobacco Trail
Durham
Chapel Hill
RTP
Cary
Apex
Orange County
Durham County
Chatham County
Wake County
0 0.5 1 2 3 4
Miles
American Tobacco Trail
Street Centerlines
Highways
Municipality
Lakes, Rivers, Streams
County Boundary



Chatham/Durham County Line

.08 Miles

.64 Miles

1.72 Miles

.4 Miles

1.12 Miles

.65 Miles

BULLOCK LN
WAKE RD
GRANNYS ACRES
Chatham/Wake County Line
PERFECT MOMENT DR
BLUE VIOLET WAY
ROSEMONT DR
LASSITER HMSTD RD
NC 751 HWY
HICKORY TRACE LN
Town of Cary
SHAD LN
NEW HOPE CHURCH RD
PADDOCK DR
ALSTONVILLE RD
OAK HILL DR
INDIAN CREEK LN
R B GOODWIN RD
MT PISGAH CHURCH RD
CLYDE FARRELL RD
POND VIEW
BARBEE RD
FERRELL RD W
EARNEST JONES RD
BLACK WILLOW DR
WOODED LAKE DR
LEWTER SHOP RD
MARTHAS CHAPEL RD
QUAIL RIDGE DR
CALICO DR

Legend

- Tax Parcels
- Cary Limits

County Boundaries

CO_NAME

- DURHAM
- WAKE

Chatham County
American Tobacco Trail

N W E S

Miles
0 0.15 0.3 0.6

Prepared by the
Chatham County
Planning Deparment
November 2005

TCC TIP/STPDA/CMAQ Meeting Agenda

Durham City Hall, Transportation Conference Room
January 18, 2005, 10:30AM

In Attendance:

- Mark Ahrendsen, City of Durham
- Ellen Beckmann, DCHC MPO
- David Bonk, Town of Chapel Hill
- Bill Bussey, Triangle Rails-to-Trails Conservancy
- Allison Carpenter, DCHC MPO
- John Hodges-Copple, TJ COG
- Leslie Kennedy, Triangle Rails-to-Trails Conservancy
- Karen Lincoln, Orange County
- Dale McKeel, Town of Carrboro
- Felix Nwoko, DCHC MPO
- Tamra Shaw, NCDOT PTD

1) **Subcommittee Structure**
   - David Bonk was elected Chair of the subcommittee.

<u>TCC/TAC Action Items</u>

2) **Update on STP-DA funds**
   - This item was skipped. Another meeting of the TIP Subcommittee will be scheduled at the 1/25/06 TCC meeting to discuss STP-DA.

General TIP Funding Discussion

A recommendation for funding for the Old Durham-Chapel Hill Rd. Bicycle/Pedestrian Improvements and Phases E and F of the American Tobacco Trail must be delayed until a draft of the 2007-2013 STIP is released in April 2006. In February, NCDOT Program Development staff may be able to give DCHC a preview of the TIP for the MPO. If this happens, DCHC may begin to explore programming these projects but must be flexible.

DCHC also could use the existing 2006-2012 STIP as a starting point to show how funds could be shifted to program these projects. We would need to note which projects would affect air quality conformity if funding were shifted. We would also need to request from NCDOT updated cost estimates for projects as this will affect how much money is available for programming in 2013. An additional meeting of the TIP subcommittee will need to be scheduled to discuss how to fund these two projects in the 2007-2013 STIP using the 2006-2012 STIP as a starting point.

3) **Discuss funding for Old Durham-Chapel Hill Rd. Bicycle/Pedestrian Improvements**

By Division, the cost, funding, and shortfall are:

	Division 5	Division 7
Costs	$2,871,000	$957,000
Funds		
STP-DA	$900,000	$300,000
NCDOT	$300,000	$100,000
Local Contribution	$225,000	$75,000
Total Funds	$1,425,000	$475,000
Shortfall	$1,446,000	$482,000

STP-DA and NCDOT funds have already been allocated. The local contributions represent a 20% match of the STP-DA. This amount has been committed by the City of Durham but Chapel Hill has not yet committed funding.

The subcommittee recommends presenting the draft report to the TCC and the TAC. We will need to note that a funding recommendation from the subcommittee will be delayed until April 2006 when the 2007-2013 draft STIP is released.

4) Discuss funding for the American Tobacco Trail

The following funds have been identified for construction of Phases E & F.

2004 Earmark	$ 992,000	
2005 SAFETEA-LU Earmark	$1,326,000	
STP-DA	$1,181,000	
NCDOT Bike/Ped Div (Phase F)	$ 900,000	
City of Durham contribution	$ 395,280	
Chatham County contribution	$ 104,000	*not definite
Durham County contribution	$ 0	
Town of Cary contribution	$ 0	
	$4,898,280	

The Bike/Ped subcommittee requested a letter be sent to the Town of Cary to request local participation on the ATT. This letter is currently being drafted. The TIP subcommittee noted that Durham County has not contributed to this phase of the ATT.

The 2005 SAFETEA-LU Earmark of $1.326 Million equals the 86% obligation limitation of the $1.6 Million earmark. 86% is the estimated amount that has historically actually been received from federal earmarks. NCDOT has proposed to split the 2005 earmark $700,000 for Chatham and $900,000 for Durham County. NCDOT must agree with the split of the 2005 earmark in order to get the funding into the STIP. The subcommittee expressed an interest in treating the two phases as one project and distributing the 2005 earmark based on however it would work best to fully fund both phases. The subcommittee recommended presenting to the TCC that we want to send a letter formally asking NCDOT to fully fund the whole project and distribute the 2005 earmark as needed.

The subcommittee also recommended presenting the funding information to the TAC. We will state that the intent is to fund the shortfall through additional local contributions

and the 2007-2013 STIP. The following table should be presented as a whole – not split by Divisions.

By Division, the cost, funding, and shortfall are:

	Division 5	**Division 8**
Costs (includes +20%)	$5,509,440	$2,804,447
Funds		
2004 Earmark	$496,000	$496,000
2005 SAFETEA-LU Earmark	$663,000	$663,000
STP-DA	$1,181,000	
NCDOT Bike/Ped Div		$900,000
Local Contribution	$395,280	$104,000*
Total Funds	$2,735,280	$2,163,000
Shortfall	$2,774,160	$641,447

MEMORANDUM

TO: DCHC MPO Transportation Coordinating Committee

FROM: DCHC MPO Lead Planning Agency

SUBJECT: Review of Draft Report for Old Durham-Chapel Hill Rd Bicycle and Pedestrian Feasibility Study

DATE: January 25, 2006

Executive Summary

In February 2005, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) initiated a bicycle and pedestrian feasibility study for Old Durham-Chapel Hill Road between Garrett Rd in Durham and Sage Rd in Chapel Hill. The City of Durham and Town of Chapel Hill have worked with consultants Kimley-Horn & Associates, Inc to complete the study and develop alternatives for building pedestrian and bicycle facilities along the corridor. The study includes preliminary construction design and costing information to aid in the selection of alternatives. Recommended alternatives include 5ft sidewalks and 5ft bike lanes on both sides of Old Durham-Chapel Hill Rd, as well as special treatments for traffic calming throughout the corridor. The addition of roundabouts, mid-block crosswalks, pedestrian refuge islands & colored pavement are proposed to increase safety for bicyclists and pedestrians traveling the corridor.

City and town staff members and a policy committee of Chapel Hill and Durham citizens helped guide the study process since February 2005. The recommended alternatives presented in the plan are based on technical analysis and community input completed specifically for this project, including an April 15-16 design charrette and June 22 open house. Throughout the planning process, the Durham Bicycle and Pedestrian Advisory Commission (DBPAC) and Chapel Hill Bike/Ped Board have given feedback through liaison members on the study's policy committee. The plan has recently been presented for review and comment by the Chapel Hill Town Council and Durham City Council in September-October 2005, and local comments were forwarded to the TAC at their November 9 meeting.

At their October 26, 2005 meeting, the TCC discussed the draft report, including the consultant's recommendation and comments from local governments, and subsequently referred this item to the Bicycle and Pedestrian subcommittee to develop a recommendation for fully funding the project. The subcommittee discussed the preference for funding the project through the 2007-2013 TIP using STP funds. The Bike/Pedestrian subcommittee has forwarded the item to the TIP/STP-DA subcommittee for further recommendations on a funding scenario for the project in the 2007-2013 TIP. The TIP/STP-DA subcommittee will be asked to provide a funding recommendation to the TAC in February, when the final report is presented for approval.

The Bike/Ped Subcommittee also discussed the "Remaining Issues" section of the report. It was decided that the report should recommend a combination of curb-and-gutter (C&G) and shoulder

section. It was suggested, for instance, that C&G might be most appropriate at Five Oaks to lessen ROW impact (i.e., reduce the amount of ROW that must be purchased). The subcommittee decided that much of the discussion related to the typical cross-section (C&G vs. shoulders) would be resolved with an environmental assessment that addresses water management issues. The subcommittee also decided to remove the bollards from the list of suggested bridge treatments. Additional issues will be addressed in the final design stage. The Bike/Pedestrian subcommittee has recommended that the project be scheduled for final design in 2007, right-of-way (ROW) acquisition in 2008, and construction in 2009.

Project Cost Estimates
The total project cost estimate has been revised, in order to include costs for an environmental study, utility relocation and construction administration. These revised costs are included below.

Environmental Study	$ 100,000
Planning & Design	$ 350,000
ROW Acquisition	$ 375,000
Construction (without roundabouts)	
On-road improvements (widening) =	$2,080,000
10ft multi-use path (asphalt) =	$ 153,000
5ft sidewalks (north side of road) =	$ 94,000
5ft sidewalks (south side of road) =	$ 176,000
	$2,503,000
Construction Administration	$ 250,000
Utility Relocation	$ 250,000
TOTAL	**$3,828,000**

There remains a funding discrepancy of approximately $2 million. The TIP/STP-DA subcommittee is currently working on a full funding strategy for the Old Durham-Chapel Hill Rd project. The funding scenario will be proposed in April 2006, when the 2007-2013 TIP is presented.

Recommended TCC Action:
The TCC is asked to review the draft report, presented by Kimley-Horn & Associates, and forward the report to the TAC for final approval. A funding recommendation will be presented with a 2007-2013 TIP update later in the Spring.

1. **Review the plan and subcommittee comments;**
2. **Recommend report to TAC for approval.**

Acknowledgements

The development of the Old Durham-Chapel Hill Road Bicycle and Pedestrian Feasibility Study was a collaborative process that involved numerous stakeholders, including Policy and Technical Committees, the Durham Chapel Hill Carrboro (DCHC) MPO, and the North Carolina Department of Transportation Pedestrian and Bicycle Unit. While the following individuals have contributed their time, ideas, and expertise, the opinions contained herein are those of the consultants.

Policy Committee

Janice Rolli Mills (Durham)
Ronnie Griffin (Durham)
Al Beuhler (Durham)
Ellen Reckhow (Durham)
Ed Harrison (Chapel Hill)
Pete Schubert (Durham)
Claire Millar (Chapel Hill)
Brian Decker (Chapel Hill - alternate)
Matt Hopgood (Chapel Hill)
Jim Ward (Chapel Hill)
Laura Gilliom (Chapel Hill)

Technical Committee

Alison Carpenter (Durham – Project Manager)
Andy Henry (Durham)
Felix Nwoko (Durham)
David Bonk (Chapel Hill)
Battle Whitley (NCDOT)
Gordon Sutherland (Chapel Hill)
Tom Norman (NCDOT)
Kumar Trivedi (NCDOT)

Kimley-Horn and Associates Consultants

Mike Rutkowski
Roger Henderson
Nik Nikolaev
Jason Johnson
Andy Kiley
Natalie Mengelkoch
Allison Lockwood
Matt West
Janet Doughty

Toole Design Group (Subconsultants)

Jennifer Toole
Robert J. Schneider

The Old Durham-Chapel Hill Road Bicycle and Pedestrian Feasibility Study is scheduled for review by the Durham Chapel Hill Carrboro (DCHC) MPO. Durham City Council, and Chapel Hill Town Council.

Project Overview/Introduction

Introduction

The purpose of this feasibility study was to prepare a bicycle and pedestrian plan that will not only serve as a prototype for other Durham/Chapel Hill corridors, but also serve as a guide for local, regional, and state agencies in developing and promoting safe, convenient facilities and services oriented to bicyclists/ pedestrians. This project was sponsored by the Durham-Chapel Hill-Carrboro MPO; City of Durham; Town of Chapel Hill; a Policy Committee (citizen-based representatives); and a Technical Committee (professional staff and local bike/pedestrian specialists).

Study Goal

"provide safe and convenient facilities and services for the people who choose to bicycle and walk"

History

Old Durham-Chapel Hill Road has been recognized as a critical link for pedestrian and bicycle travel by Durham and Chapel Hill for more than10 years. Improving the safety and convenience of walking and bicycling along this corridor will help both communities accomplish a task that has long been identified as a critical connection between the two.

The *1993 Regional Bicycle Plan* for Durham and Orange Counties identified Old Durham-Chapel Hill Road as a key bicycle connection between Durham and Chapel Hill. The Plan listed non-motorized trip generators within the corridor and identified opportunities for adding bicycle lanes along the roadway. It can be viewed at the City of Durham website: www.durhamnc.gov/departments/works/transportation.cfm

Several other plans have also recommended Old Durham-Chapel Hill Road as a key corridor for pedestrian and bicycle improvements. The *Town of Chapel Hill Comprehensive Plan* (2000) established the goal of developing a "balanced, multi-modal transportation system that will enhance mobility for all citizens, reduce automobile dependence, and preserve/enhance the character of Chapel Hill." The *2004 Town of Chapel Hill Draft Bicycle and Pedestrian Action Plan*, adopted October 2004, recommends:

- Providing sidewalks on both sides of Old Durham-Chapel Hill Road
- Striping bicycle lanes along the road
- Improving pedestrian and bicycle conditions at the intersection of US 15/501 and Scarlett Drive

The plan can be viewed at the following website:

townhall.townofchapelhill.org/planning/bikeped/BikePedPlan.htm

One of the goals of the Durham-Chapel Hill-Carrboro (DCHC) MPO *Draft 2030 Long Range Transportation Plan* (LRTP) is to establish a "pedestrian and bicycle system that: provides an alternative means of transportation; allows greater access to public transit; and supports recreational opportunities." The 2030 LRTP specifically recommends that bike lanes be provided on Old Durham-Chapel Hill Road.

Need for Project

As noted in previous planning efforts, Old Durham-Chapel Hill Road is an important corridor for pedestrian and bicycle travel. The list below summarizes the need for pedestrian and bicycle facility improvements along the corridor. The list was developed based on research for the project as well as discussions with the DCHC planning staff.

- Old Durham-Chapel Hill Road is a key transportation connector between Chapel Hill and Durham. It serves as the only direct connection between Durham and Chapel Hill for people who wish to avoid US 15/501. The corridor provides access to a future public park, greenways, several existing and future apartment complexes, residential neighborhoods, churches, Githens Middle School, Blue Cross/Blue Shield, shopping, and offices on US 15/501. Both UNC-Chapel Hill and Duke University are within bicycling distance of the corridor.

- Existing pedestrian and bicycle facilities include discontinuous sidewalks and shoulders. There are few opportunities to cross the road, and where they do exist, they lack crosswalks, pedestrian signals, median crossing islands, pedestrian lighting, or other safety treatments. None of the transit stops have benches or shelters.

DCHC
Durham-Chapel Hill-Carrboro
METROPOLITAN
Planning Organization

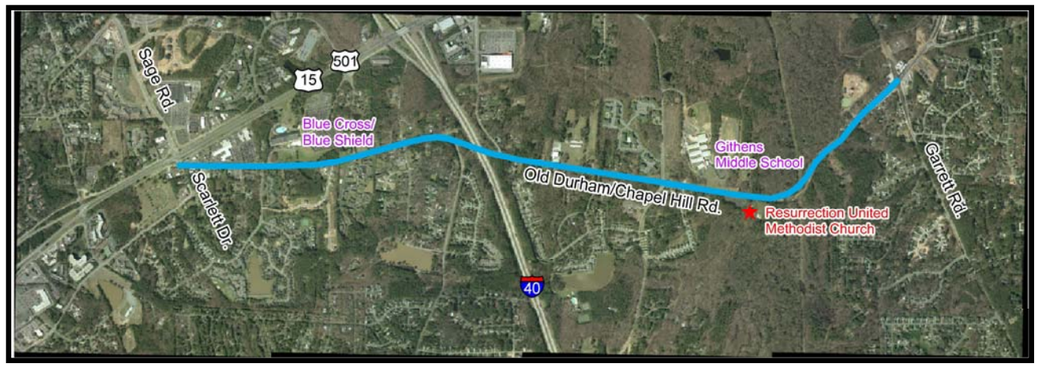
Old Durham-Chapel Hill Road
Bicycle/Pedestrian Feasibility Study

- Improvements in the area around Githens Middle School will make it safer for students and staff to walk and bicycle to school.
- New development is occurring along the roadway and in surrounding areas. It is important to take advantage of opportunities to add pedestrian and bicycle facilities while development occurs, rather than making expensive retrofits in the future after development is already established.

- The roadway has bus stops for several transit systems (Triangle Transit Authority (TTA), Chapel Hill Transit, and Durham Area Transit Authority (DATA)). Often these bus stops are isolated and difficult to access on foot or by bicycle. Providing safe and convenient pedestrian and bicycle access to transit can make bus service accessible to more customers and increase ridership.

- Pedestrian and bicycle facilities on Old Durham-Chapel Hill Road would provide residents of the area with more choices in how they travel to nearby destinations. Many roads in the surrounding areas lack shoulders, bike lanes, or sidewalks.
- Pedestrian and bicycle facilities offer opportunities for recreation. Residents of the Old Durham-Chapel Hill Road Corridor will have the option to run or bike from home rather than drive to a park, trail, or gym to get exercise. Furthermore, access to scenic greenways along the Booker Creek trail in Chapel Hill and the New Hope Creek trail in Durham will be possible with these improvements.
- Better pedestrian and bicycle facilities will make it safer for people who are already walking and bicycling along the roadway. New sidewalks, shared-use paths, bike lanes, and crosswalks will make the roadway more attractive to people who currently avoid this roadway because they feel it is unsafe.
- Pedestrian and bicycle improvements will slow the increase in automobile emissions. As people feel more comfortable and begin making safe trips on foot and by bicycle on Old Durham-Chapel Hill Road, some automobile trips may be replaced by non-motorized trips.
- Providing bicycle and pedestrian facilities along Old Durham-Chapel Hill road will provide needed amenities for those who choose to ride because of age, economics or physical barriers to operating a vehicle.

The DCHC MPO identified a 2.7 mile section of the Old Durham-Chapel Hill Road between US 15/501 and Garrett Road to be included in this study.



Public Outreach/ Project Coordination

Technical Committee/Policy Committee

A technical committee made up of professional staff and bicycle/pedestrian specialists was formed to serve as a sounding board for the consultant's technical work and recommendations. This committee met with the project team as needed throughout the planning process. The technical committee provided valuable direction on the proposed improvements including addressing problem areas such as the busy intersection of US 15/501 and crossing the I-40 bridge.

Also, a citizen-based policy committee representing Durham and Chapel Hill municipalities with experience in bicycle and pedestrian planning activities was formed to help guide the planning process and study issues. This policy committee also helped communicate and affirm findings with the public, and will be asked to facilitate a decision by elected and appointed officials to determine a preferred plan. Several issues were addressed by the policy committee — most important was their development of the vision and goals of the study.

DCHC TAC/TCC Coordination

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) is responsible for transportation planning activities within this region. The proposed improvements identified and outlined in this study will be considered by the DCHC MPO on DATE to be determined.

Design Charrette/Open House

A public design charrette was conducted April 15 and 16, 2005 to engage the public, elected officials, and planning staff in the development of bicycle and pedestrian improvements along the Old Durham-Chapel Hill Road corridor. Invitations were mailed to residents and businesses along the corridor by the City of Durham. Over 50 participants attended the two-day event. The purpose of the design charrette was to give citizens the opportunity for "hands-on" involvement with the development of the Old Durham-Chapel Hill Road bicycle and pedestrian facilities. Local citizens, business owners, community groups, local staff, and the project team worked together as a collective group to identify issues and concerns, develop goals and a vision, and "brainstorm" possible solutions and recommendations.

Held at Resurrection United Methodist Church in the study corridor, the charrette format allowed interested groups the opportunity to share their thoughts about bicycle and pedestrian needs. The two-day event encouraged participation using mark-up maps and "Post-it" notes. Brainstorming sessions and planning activities specifically tailored to generate discussion were conducted to identify bicycle and pedestrian access and mobility throughout the corridor, natural and manufactured constraints, and to develop ideas for improvement. Key exercises conducted with the public included:

Day one:

- Issues identification exercise
- Brainstorm on key issues and needs
- Survey participants
- Establish a "vision"

Day two:

- View maps of alternative solutions
- Identify "pros" and "cons"
- Citizen comments on ideas

Landscape architectural renderings as well as before and after Photoshop renderings were used throughout the two-day charrette to provide a visual concept of what could be done with the corridor. These tools proved to be effective in developing community support.

Pedestrian facilities

Generic before

Generic after rendering

Bike facilities

Generic before

Generic after rendering

Supporting facilities

Numerous comments were received at the charrette that identified issues and needs for Old-Durham-Chapel Hill Road. Some of those comments, including questions and suggestions for improvements, are included below:

- Safe bike/pedestrian for children and intermediate users
- Attractive/viable alternative to driving
- If roadway is later widened, will the bike/pedestrian facilities be reduced?
- Intersection crosswalks — especially for transit users
- Bike lanes vs. wide outside lanes — preference for dedicated lane
- Lower speed limit to 35 mph
- Connections needed to New Hope Creek Greenway
- Intersection crossing for bike/pedestrian facilities need:
- ADA Curb Ramps
- Pedestrian refuge islands
- Bike activated traffic lights
- Provide plantable separation between road and sidewalk/multiuse path
- Pedestrian countdown at traffic signals
- Githens Middle School — key destination
- Resurrection Church — key destination
- School functions use church parking
- Pedestrian light, crosswalk, traffic calming may be appropriate
- Transit — bus pullouts
- New right-of-way — limit additional takings
- Maintenance of on-road facilities
- Debris issues — can we get it swept once a month?
- Bike lane (collects more debris) vs. wide outside
- Bus stops landscape (not grass)
- Shelters at bus stops with secure weather protected bike storage
- Use porous pavement — previous surface for walkway
- Lighting at all intersections
- Lighting at all bus stops
- Bench at all bus stops
- Lower posted speed limit to 35 mph from Mt. Moriah to Watkins
- Look for grade separation opportunities
- Bike/pedestrian detectors
- Shade with buffers
- Flex design — expansion potential
- Advanced stop ban for bikes

As a follow-up to the design charrette, a public open house was held on June 22, 2005 to present the draft plan and constructability drawings to the general public. Invitations were mailed to every address in the study corridor by the City of Durham. The forum was attended by 35 participants and provided an excellent opportunity to obtain valuable feedback from the public on specific recommendations and changes to the plans. Subsequent design changes were made to the constructability drawings as a result of the open house.

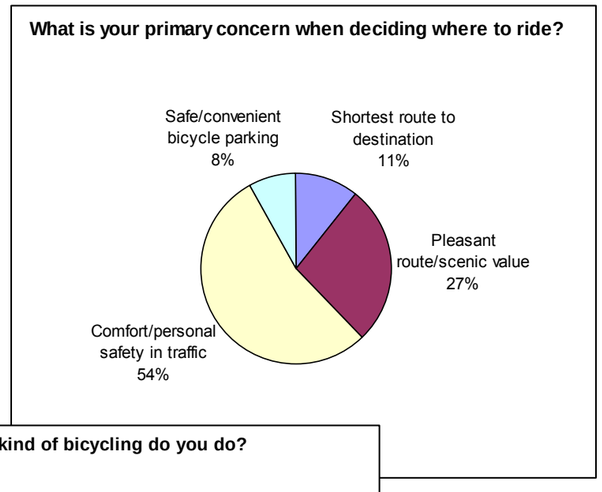
Overall, the recommendations and plans were generally supported by the attendees. Most of the comments were related to design changes and suggestions that were incorporated into the constructability drawings.

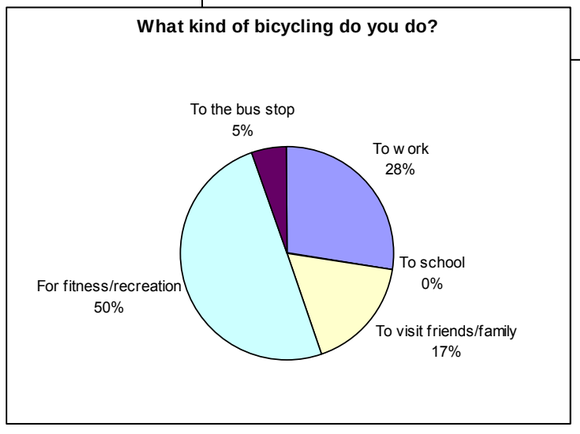
Today

Rendering of the Future

Public Survey Results

Public outreach was not limited to the charrette and open house. A public survey was distributed to committee members, planning staff, and the general public. The surveys were administered at the design charrette, open house, committee meetings as well as provided to individuals who could not attend the meetings but expressed an interest in bicycle and pedestrian planning. Twenty open-ended and multiple choice questions were included in the survey asking questions about bicycle and pedestrian choices and trade-offs. A total of 52 surveys were completed and compiled for consideration by the project team. The following provides a summary of select questions and results from the survey. See survey form in the appendix for a complete list of questions and results.





Goals and Objectives

The goals for this study were developed based on thoughtful community discussions including direct public outreach, community survey results, and meaningful planning staff and committee involvement. The following goals attempt to balance the vision and objectives expressed by committee members *and* comments received at the public design charrette and open house. The Consultant believes this design adequately addresses all of the goals listed below except minimization of right-of-way takings. This issue is addressed on page 19.

- Need for consistent cross section
- Improve travel safety for ALL modes
- Limit driver, pedestrian, and bicyclist confusion
- Use existing facilities where practical
- Need for facilities that serve pedestrians and bicyclists
- Avoid residential relocations
- Minimize right-of-way takings
- Provide for all types of cyclists and levels of experience
- Make corridor transit-friendly
- Avoid/minimize major bridge construction

Existing Conditions

Pedestrian and Bicycle Conditions

Pedestrians and bicyclists use all parts of the Old Durham-Chapel Hill Road corridor. It is essential to provide safe facilities for these non-motorized users.

The highest levels of pedestrian activity are found near pedestrian trip attractors, such as bus stops, schools, and apartment complexes. Sections of the roadway with undeveloped land currently have lower pedestrian volumes. This will change as parcels of land in the corridor are developed. Bicyclists use the entire length of Old Durham-Chapel Hill Road between US 15/501 and Garrett Road.

Existing pedestrian and bicycle facilities include several disconnected sidewalks and shoulders (illustrated in the constructability drawings included in the appendix). Few crossings of Old Durham-Chapel Hill Road have been improved with crosswalks, pedestrian signals, median crossing islands, or other treatments.

For pedestrians and bicyclists traveling along Old Durham-Chapel Hill Road, the intersections with US 15/501, Scarlett Drive, Pope Road, Mount Moriah Road, Farrington Road, and Garrett Road are challenging due to wider crossing distances and higher volumes of turning vehicles. The bridge over Interstate 40 is particularly difficult for pedestrians and bicyclists. This bridge has shoulders (4-feet wide) adjacent to concrete jersey barriers.

Pedestrian and bicycle lighting is minimal along the entire Old Durham-Chapel Hill Road corridor. This issue was identified by members of the public who reside along the corridor and find it difficult to travel on foot or bike at night. Some crosswalks and sidewalk sections could be made safer by adding low-level street lights.

Transit Service

Old Durham-Chapel Hill Road serves several bus systems — TTA, Chapel Hill Transit, and DATA. TTA and DATA serve the eastern portion and Chapel Hill Transit serves the western end of the roadway.

None of the existing bus stops have benches or shelters. Few have level landing areas for people with disabilities. Most of the Chapel Hill Transit bus stops are served by sidewalks, but many of the DATA and TTA bus stops have been placed in locations where passengers must wait in the grass or on the roadway shoulder.

Transit users often need to cross Old Durham-Chapel Hill Road to access the bus stop. High-speed, high-volume traffic makes these crossings difficult. The only bus stop served directly by a crosswalk is across from Githens Middle School.

Traffic Volumes

Traffic along Old Durham-Chapel Hill Road has steadily increased over the past several years. Traffic volumes along this corridor near Scarlett Road and Garrett Road are 7,300 vehicles per day (vpd) and 16,000 vpd, respectively. Since 1999, average daily traffic volumes have increased an average 3 to 4%. Level of service operations analyzed at the signalized intersections of US 15/501 and Garrett Road indicated LOS F and LOS C, respectively, for the peak hour. High traffic volumes along the corridor will continue to be problematic for safe pedestrian and bicycle mobility if provisions are not made for these alternative modes. For additional LOS information, please see the appendix.

It should be noted that traffic volumes along the US 15/501 corridor are 45,000 vpd. Since US 15/501 has become the mobility corridor, it stands to reason that Old Durham-Chapel Hill Road should be protected as a local facility which supports slower speeds and provisions for bicycle and pedestrians.

Traffic Crashes

The North Carolina average crash rate for a 2- to 3-lane undivided state route is 393 crashes per 100 million vehicle miles traveled (MVMT), according to the North Carolina Department of Transportation (NCDOT). Between August 31, 2001 and August 31, 2004, NCDOT reported 416 crashes along Old Durham-Chapel Hill Road. Four hundred and five of these crashes occurred along Old Chapel Hill Road in Durham County. This translates to a total crash rate of 1,758 crashes per 100 MVMT, which is almost five times the state average crash rate for a similar road. The Severity Index (a measure of crash severity relative to property damage and injury) is similar to the State average at 4.00. The appendix includes a crash summary for the Old Durham-Chapel Hill Road corridor.

Source:
(www.doh.dot.state.nc.us/preconstruct/traffic/Safety/ses/rates/2002/statewide.pdf)

Five pedestrian- or bicyclist-related crashes occurred within the 3-year time period, as described below:

- 9/30/2001 (just west of Fine Oaks Drive) — a passenger car leaving a parked position struck a pedestrian; occurred at 9:00 pm under dark (no roadway lighting) conditions
- 4/09/2003 (at intersection with Buchanon Drive) — a passenger car traveling eastbound at 30 mph struck a pedestrian under daylight conditions (4:17 pm)
- 12/23/2001 (just west of Garrett Road) — a passenger car traveling at 45 mph struck and fatally wounded a pedestrian under dark (some roadway lighting) conditions; pedestrian was found to be under the impairment of alcohol
- 05/24/2003 (at intersection with Garrett Road) — a passenger car traveling eastbound at 50 mph struck and fatally wounded a pedestrian under daylight conditions at 2:31 pm; pedestrian was found to be under the impairment of alcohol
- 11/23/2002 (just west of University Drive) — a sport utility vehicle traveling 30 mph struck a bicyclist under daylight conditions; no injuries were reported

Although the causational factors contributing to these crashes involving bicycle and pedestrians are well-documented, no reccurring trends were identified.

Field Observations

During the initial phase of the study, a "windshield survey" was conducted to identify and document key points of interests or "destinations" along the Old Durham-Chapel Hill Road corridor. It was important to identify these points along the corridor so that the proposed bicycle and pedestrian improvements could be tailored to users of these facilities. A good example of this is providing a 10-foot multiuse path near the Githens Middle School because parents expressed they felt that the path would be safer for their children to use rather than on-road bike facilities. With this in mind, key destination points along the corridor and in the surrounding area include:

- On Old Durham-Chapel Hill Road
  - Githens Middle School
  - Resurrection United Methodist Church
  - New Hope Creek Trail
  - Apartment complexes (The Verge, etc.)
  - Blue Cross/Blue Shield
  - Bus stops (TTA, Chapel Hill Transit, and DATA)
  - Residential neighborhoods
  - Businesses at intersection with US 15/501
- In surrounding area
  - Downtown Durham
  - Downtown Chapel Hill
  - UNC-Chapel Hill
  - Duke University
  - University hospitals
  - Businesses in the US 15/501 Corridor
  - Residential neighborhoods

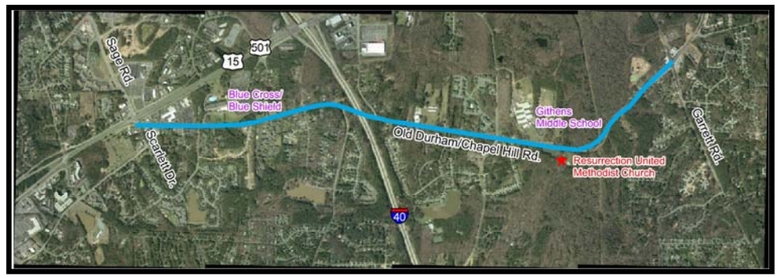
In addition to the "windshield survey," a more detailed field survey was conducted using Trimble GPS units. The data gathered in the field survey was reviewed as the constructability drawings were developed. Therefore, it was important to gather specific locations (using Global Positioning System or GPS) of on-road facilities as well as potential obstructions within the existing right-of-way limits. Specific field data included:

- Presence of bike/pedestrian facilities (sidewalks, multiuse paths, etc.)
- On-road features (e.g., edge of pavement, curb and gutter, crosswalks)
- Posted speed limit
- Location of obstacles (e.g., poles, signs, fire-hydrants, landscaped areas)
- Barrier locations (e.g., bridges, culverts)

These features identified during the field survey can be viewed in the constructability drawings included in the appendix.

Alternatives Evaluation

Several types of pedestrian and bicycle facilities were considered for improving the safety and comfort of walking and bicycling in the Old Durham-Chapel Hill Road corridor. Bicycle and pedestrian alternatives were developed for the section of Old Durham-Chapel Hill Road between US 15/501 and the Garrett Road intersection.



Both on-road and off-road pedestrian and bicycle facility alternatives were considered for the length of the 2.7 mile roadway corridor. These facilities included:

- Sidewalks (on one side or both sides of the roadway)
- Multi-use paths adjacent to the roadway
- Wide outside travel lanes
- Paved shoulders
- Bike lanes

Various facility types also were considered to improve roadway crossings, including.

- High-visibility crosswalks
- Median refuge islands
- Raised crosswalks
- Flashing crosswalks
- Crosswalk warning signs
- Pedestrian-activated signals
- Pedestrian countdown signals
- Bike-friendly traffic signals
- Pedestrian-level lighting

After these facilities were considered, preferred alternatives were chosen and recommended for Old Durham-Chapel Hill Road.

Preferred Alternatives

The section below describes the pedestrian and bicycle facilities recommended for the Old Durham-Chapel Hill Road corridor. The final recommendations were prompted by the consultant and supported in concept by the policy committee and planning staff because they were the most consistent with the study goals and objectives. *Note: these facilities will need to comply with all requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) (1).*

Recommended Facilities for Length of Roadway Corridor

This study recommends a two- or three-lane roadway cross-section with bike lanes and sidewalks (where applicable) on both sides for the entire length of the Old Durham-Chapel Hill Road corridor. The facilities that were chosen for the length of the corridor (standard sidewalks, wide sidewalks, and bike lanes) are discussed below.

Standard Sidewalks

The typical sidewalk width along Old Durham-Chapel Hill Road should be a minimum of 5 feet. Sidewalks are recommended on both sides of the roadway (where feasible) to improve pedestrian safety. While it would be less expensive to provide a sidewalk on one side of the road, having sidewalks on both sides minimizes the need to cross the roadway in midblock locations.

These sidewalks should include accessible roadway and driveway crossings and meet all ADAAG requirements. A grass or tree-lined buffer should be provided between the sidewalks and the roadway to give added protection to pedestrians.

There is a short section on the south side of the street where the roadway right-of-way is constrained by a pond, making it difficult to provide a sidewalk. In this location, pedestrians on the south side of the road should use new crosswalks to access the sidewalk on the north side.

Five-foot-wide sidewalks were chosen as the primary off-road facility because there is not enough pedestrian and bicycle activity in the corridor at this time to recommend wider sidewalks. As development occurs and pedestrian and bicycle volumes increase in the future, wider sidewalks may be needed throughout the corridor.

Wide Sidewalks

Two locations on the north side of the roadway are recommended for 10-foot multiuse paths. These wide paths will be designed to serve a variety of non-motorized users, including pedestrians and bicyclists. Wide paths provide a more comfortable place for bicyclists who do not feel safe riding on the road. However, bicyclists will retain the right to use the roadway travel lanes and bike lanes.

One stretch of 10-foot multiuse path will be near Githens Middle School. This wide path will likely serve more children and inexperienced cyclists than other places along the corridor because of its proximity to the school and the future New Hope Trail. The second section of wide path is near Blue Cross/Blue Shield. A narrower sidewalk has already been established along the roadway in this location that can be widened.

These wide paths are recommended in corridors with few driveways and intersections because conflicts between turning motorists and bicyclists are less of a problem. Where crossings occur, advance warning markings and signs should be provided for bicyclists on the path and drivers on the intersecting roadway.

Wide paths were not recommended along more sections of Old Durham-Chapel Hill Road because other parts of the road have more intersecting roadways and driveways. In addition, wide paths are more costly than standard sidewalks.

Bike Lanes

Bike lanes should be provided along the entire length of Old Durham-Chapel Hill Road. They were recommended over paved shoulders and wide outside travel lanes for several reasons. First, research has shown that bicyclists have an enhanced sense of comfort riding along a segment of roadway when there is a bike lane or paved shoulder stripe separating them from motor vehicle traffic. Therefore, it is likely that the bicycle lanes will be used by a greater variety of residents in the Old Durham Chapel Hill Road Corridor.

Unlike paved shoulders and wide outside lanes, bike lanes have signs and markings that show bicyclists the proper direction to ride and the proper way to position themselves at an intersection. This reduces bicycle crashes. Bike lanes can also increase the predictability of motor vehicle and bicycle traffic movements and help to visually narrow the road. In contrast, wide vehicle travel lanes make drivers feel like they can travel faster, which is less safe for pedestrians and bicyclists. Finally, the bike lanes will be a visible signal that bicycling is welcomed as a transportation option in the Durham and Chapel Hill area.

Recommended Facilities for Roadway Crossings

A variety of roadway crossing treatments are recommended along Old Durham-Chapel Hill Road to enhance the safety of pedestrians and bicyclists. This section describes standard treatments that should be used at all roadway crossings and special treatments that should be added at specific locations.

Standard Crossing Treatments

Each roadway crossing in the Old Durham-Chapel Hill Road corridor should have curb ramps (where applicable) and meet the accessibility requirements of ADAAG (which includes providing curb ramps, level landings, and stable surfaces).

All crossings should also have adequate lighting for pedestrians to reduce nighttime crashes. Lighting is particularly important along parts of Old Durham-Chapel Hill Road with frequent nighttime activity, specifically in commercial areas (near US 15/501 and future commercial developments), high-density residential areas (apartment complexes), and bus stops.

Preferred pedestrian-scale lighting is characterized by shorter light poles (i.e., 15-foot tall posts) and shorter spacing between lamp posts than lighting for motor vehicles. Crosswalks should be illuminated by a standard street lamp.

High-visibility crosswalk markings should be installed at all designated crossing locations. These markings indicate where pedestrians should cross the street and where drivers should yield to pedestrians.

A recent national research project completed by the Federal Highway Administration (FHWA) provides specific guidance on the installation of crosswalks and other safety measures at uncontrolled locations. This results of the study clearly indicate the safety benefits of enhancing pedestrian crosswalks with additional safety measures, such as pedestrian crossing islands, shortened crossing distances, traffic and pedestrian signals (where warranted), and other traffic-calming treatments (e.g., roundabouts, reduced turning radii at intersections, and variable message signs that show drivers their current speed).

The FHWA study recommends that uncontrolled midblock crossings on roadways like Old Durham-Chapel Hill Road (with an AADT of more than 15,000) include high-visibility crosswalks plus an engineering treatment when the posted speed limit is 35 mph and be served by a pedestrian signal or bridge when the posted speed is 40 mph or faster. Specific crossing enhancements are recommended in this study to meet these guidelines and improve pedestrian safety in the corridor.

Special Crossing Treatments at Specific Locations

A critical location for pedestrian crossing improvements is at Githens Middle School. This crossing is in a section of Old Durham-Chapel Hill Road with a posted speed of 40 mph. The existing marked crosswalk at this location will be improved with the following combination of treatments:

- Lower posted speed limit to 35 mph
- A new pedestrian-activated traffic signal with pedestrian countdown signals
- Recessed stop bars on both sides of the crosswalk
- Accessible curb ramps at both ends of the crosswalk
- Crosswalk warning signs at the crosswalk and in advance of the crosswalk
- Better pedestrian-level lighting

A pedestrian-activated signal will stop traffic completely so that pedestrians can cross Old Durham-Chapel Hill Road. While many pedestrians would use this crossing before and after school, it is unlikely that the signal would be activated regularly throughout the day, so it would not add significantly to motor vehicle delay on the roadway.

Two recommended mid-block crossings on the west end of the corridor are in locations with a posted speed limit of 35 mph. These locations will be served by marked crosswalks, pedestrian crosswalk warning signs, and median refuge islands. Median islands will help improve pedestrian safety by serving as a refuge and allowing pedestrians to cross one direction of traffic at a time. The pedestrian warning signs should be provided at and in advance of the pedestrian crossings, in accordance with MUTCD guidelines. These signs should be the fluorescent yellow-green color described in the MUTCD. Pedestrian-activated signals are not recommended due to the probability that other safety measures can be installed to adequately enhance pedestrian safety at these locations.

Two other recommended mid-block crossing locations near Blue Cross/Blue Shield include crosswalks and fluorescent yellow-green pedestrian warning signs. However, these crossings are in locations that currently have a 40 mph posted speed limit. Therefore, traffic calming measures should be used to slow vehicles on the roadway so that the posted speed limit can be reduced to 35 mph. With a posted speed of 35 mph, it would be appropriate to provide in-street pedestrian signs at these crosswalks.

In-street retro-reflective pedestrian signs display a "YIELD TO PEDESTRIAN IN CROSSWALK" sign and are placed in the center of the road. These signs should be made of a flexible material that will not present a hazard when touched or struck by a vehicle.

The signalized crossings at US 15/501, Farrington Road, and Garrett Road (and future signalized crossings) should have pedestrian countdown signals. This will help provide more information to pedestrians about how much time they have to complete crossing the roadway. The clearance interval at these signals (amount of time between the beginning of the flashing UPRAISED HAND/ "DON'T WALK" signal and the green light in the opposite direction) should be timed to allow pedestrians who travel at 3.5 feet per second (slower than the average pedestrian) to reach the opposite curb safely.

Photo by Mary Ann Koos, Florida DOT

These traffic signals should also be made more suitable for bicyclists. Special bicycle detection equipment can be installed, such as loop sensors or detection cameras. In addition, the traffic signals can be timed to allow bicycles enough adequate clearance during the green and yellow phases.

As properties are developed in the future along the length of Old Durham-Chapel Hill Road, existing pedestrian crossings should receive additional safety treatments (median refuge islands, pedestrian-activated signals, raised crosswalks, etc.). Additional locations for safe crossings should also be studied when pedestrian demand increases.

Constructability Drawings

Utilizing the base mapping, field reconnaissance, GPS survey data, alternative evaluation and input received at the public design charrette and open house, the project team developed constructability drawings for the proposed bicycle and pedestrian improvements. This effort included an evaluation of physical and property impacts associated with the constructability of the proposed improvements.

Typical sections in conjunction with horizontal and vertical conditions were developed using the Microstation and GIS information obtained from local agencies and from the field review. Ultimately, the constructability drawings were used to identify potential impacts to the right-of-way and quantify probable construction costs. The constructability drawings and the design criteria are included in the appendix.

Other Approved or Planned Projects

According to local planning staff and NCDOT, there are no planned roadway (public) projects along the study corridor. However, two private development related projects are slated to occur within the near future. The Performance Auto Park redevelopment project is currently under site plan review stage with the Town of Chapel Hill. This project includes some on-road improvements along the western section of the Old Durham-Chapel Hill Road corridor between Scarlett Drive and just east of Cooper Street.

As a result of this project, the constructability drawings have been revised to include a continuous left-turn lane along this section of the corridor. In addition, a pedestrian crosswalk has been located on the west side of Cooper Street to accommodate the expected increased use of employee parking located on the south side of Old Durham Chapel Hill Road.

The Patterson Place development project is a phased project that includes a roundabout at the intersection of Old Durham-Chapel Hill Road and Mt. Moriah. The idea of a roundabout at this location is very favorable to the local planning staff, the public participants of this study, and the developer as it will provide a needed traffic calming affect along the corridor as well as a gateway to the corridor.

Areas of Interest

Several locations along Old Durham-Chapel Hill Road have particularly challenging conditions for pedestrians and bicyclists. More complex solutions are often needed at these locations because of high volumes of turning traffic, fast vehicle speeds, long-distance crossings, and right-of-way constraints.

US 15/501 — Scarlett Road Intersection

The US 15/501 intersection is at the west end of the Old Durham-Chapel Hill Road corridor. There are many activite destinations within one-quarter mile of this intersection, including restaurants, stores, residential neighborhoods, and a bicycle route into the Town of Chapel Hill. Conditions are challenging for pedestrians and bicyclists due to the extremely high volume and speed of traffic on US 15/501, high volume of traffic on Sage Road and Scarlett Drive, and large numbers of turning vehicles at the intersection.

Currently, there is one planned intersection improvement project that would impact the operation of this intersection. The project calls for converting the service road located adjacent to the Hardee's restaurant from two-way to one-way (westbound)operation using a channelized median at the intersection with Old Durham-Chapel Hill Road (please see the constructability drawings in the appendix). This improvement should help to limit driver, pedestrian, and cyclist confusion at this congested intersection.

Recommended bicycle and pedestrian improvements

As a part of this study, it is recommended that improvements to this intersection include new pedestrian countdown signals, better roadway lighting, traffic signals at Old Durham-Chapel Hill Road and Scarlett Drive, and more organized turning movements from Scarlett Drive to US 15/501.

New crosswalks will be striped on three legs of the intersection to enhance the visibility of pedestrians and re-enforce the requirement for vehicle drivers to yield to crossing pedestrians. Stop bars will also be added to the motor vehicle travel lanes to help keep the crosswalks clear of encroaching vehicles.

No crosswalk will be provided on the northeast side of the intersection (across US 15/501) at this time. If a crosswalk is provided in the future, it should be perpendicular to US 15/501 (not angled) to reduce total crossing distance. The crosswalk should pass through the roadway median so that pedestrians would have a refuge while crossing. Finally,

pedestrians should have an exclusive pedestrian signal to prevent conflicts with turning vehicles.

Bicycle lanes will be striped through the intersection to help direct bicyclists traveling straight across US 15/501 to the new bike lanes on Sage Road.

A new left-turn bicycle lane will be provided to the right side of the exclusive left-turn lane for motor vehicles to provide additional space for bicyclists and a short shared-use path will be constructed from the west corner of the intersection to Dobbins Road. Both of these facilities will help bicyclists make the transition from the Old Durham-Chapel Hill Road bike lanes to the bicycle route on Dobbins Road that leads cyclists to the Booker Creek Greenway.

Githens Middle School

The improvements to Old Durham-Chapel Hill Road will make it safer and more comfortable for students and teachers to walk and bicycle in the area near Githens Middle School. New bike lanes, sidewalks, and multiuse paths along the roadway will improve conditions for non-motorized travel along Old Durham-Chapel Hill Road. On the school side of the road, a 10-foot wide multiuse path is proposed. This facility will provide space away from the road for bicyclists who do not feel comfortable riding in the bicycle lanes. It would also be connected to the New Hope Nature Trail through a future public park adjacent to Old Durham-Chapel Hill Road.

Before

After Rendering

The existing crosswalk across Old Durham-Chapel Hill Road connects the TTA/DATA bus stop with the school driveway. Motor vehicles travel at high-speeds in this section of the road, making it difficult for pedestrians (especially young students) to cross. Rush hour periods are particularly difficult because of high traffic volumes.

Recommended bicycle and pedestrian improvements

Several improvements will be made at this crossing, including:

- Installing new pedestrian-activated traffic signal with pedestrian countdown signals
- Adding recessed stop bars on both sides of the crosswalk to increase the prominence of the crossing and to make drivers stop
- Constructing a sidewalk connection to the crosswalk
- Providing curb ramps at both ends of the crosswalk
- Posting crosswalk warning signs at the crosswalk and in advance of the crosswalk
- Installing better pedestrian-level lighting

Crosswalks will also be provided at locations where the multiuse path crosses the driveway near the school. Recessed stop bars will be provided to make drivers more aware of their responsibility to stop for path users, and pavement markings and signs can be provided on the path/trail to warn trail users of upcoming intersections. In the future, a new bench and shelter should be provided at the bus stop.

New Hope Creek Bridge Crossing

The New Hope Creek bridge crossing presented a slight challenge to this study and the project team. The bridge itself is 40 feet wide from face-to-face of the bridge rail. With 12-foot travel lanes, this leaves 8-foot shoulders to accommodate bicyclists and pedestrians. As noted previously, one of the goals of this study was to limit new bridge construction. Therefore, a separate bridge was cost-prohibitive.

Recommended bicycle and pedestrian improvements

Several improvements will be made at this bridge crossing, including:

- Transition area from bike lane and sidewalk to shared-use bicycle and pedestrian shoulder on both ends of bridge
- Paint the shoulder area red so that it visually narrows the road for drivers and adds prominence to the shared pedestrian and bicycle space
- Use wide (8”) stripes between the travel lane and the shoulder (stripes could be dashed with long dashes and small spaces to add prominence). This treatment will communicate to pedestrians and bicyclists that they should continue to pay attention to motor vehicles because they could cross the line.

- Advance warning signs and markings to make drivers aware of pedestrian and bicycle shoulder
- Add pedestrian-level lighting to bridge
- Connect to future extension of the New Hope Creek Nature Trail

Mount Moriah — I-40 — Pope Road Section

The section of Old Durham-Chapel Hill Road between Mount Moriah and Pope Road may be the toughest challenge along the corridor. Currently, there are plans to improve the two intersections of Mount Moriah and Pope Road into future roundabouts. The existing I-40 bridge is only 30-feet wide from face-to-face of the bridge rail. With 12-foot lanes, this only leaves 3-foot shoulders to accommodate bicyclists and pedestrians.

Recommended bicycle and pedestrian improvements

Several improvements will be made along this section of Old Durham-Chapel Hill Road, including:

- New roundabouts at Mount Moriah Road and Pope Road will improve intersection efficiency and help to calm traffic
- New roundabouts help define area across I-40 bridge as a slow speed zone to improve safety for motor vehicles, pedestrians, and bicyclists
- Transition area from bike lane and sidewalk to shared-use bicycle and pedestrian shoulder on both ends of I-40 bridge
- Provide 3-foot shared-use bicycle and pedestrian shoulder on both sides of bridge or provide 6-foot shared-use bicycle and pedestrian shoulder on one side of bridge
- Paint the shoulder area red so that it visually narrows the road for drivers and adds prominence to the shared pedestrian and bicycle space
- Use wide (8") stripes between the travel lane and the shoulder (these could be dashed with long dashes and small spaces to add prominence). This treatment will communicate to pedestrians and bicyclists that they should continue to pay attention to motor vehicles because they could cross the line.
- Add pedestrian-level lighting at roundabouts and to I-40 bridge
- Possibly add new pedestrian/bicycle bridge in the future (could cantilever or add as separate structure on northeast side or southwest side)

Garrett Road Intersection

Within the past few years, the Garrett Road intersection was widened to include left-turn bays at all of the approaches. Based on existing traffic counts (provided by the City of Durham) and an operational analysis (using Synchro software) of peak hour traffic conditions, the level of services (LOS) of the intersection is more than adequate at LOS "C."

The Old Durham-Chapel Hill Road approach to this intersection is seven lanes with curb and gutter. To limit the cost of construction and utilize the wide existing cross section, the project team considered removing one of the two left-turn bays at the approach of the Garrett Road intersection. A capacity analysis of this approach showed that removal of one of the two left-turn bays was acceptable. In fact, the left-turn traffic volume could triple in the future and still adequately be served in one left-turn lane.

Recommended bicycle and pedestrian improvements

Several improvements are recommended at the approach to this intersection, including:

- Current geometry is extremely wide, with double left-turn lanes
- Remove left-turn lane from eastbound Old Durham-Chapel Hill Road, add median refuge space, and reduce curb return radii
- Bike lanes will be provided on the left side of the right-turn only lanes
- Pedestrian countdown signals will be added to all legs of the intersection
- Better pedestrian-level lighting will be provided at each crosswalk
- More potential pedestrian and bicycle activity from new development occurring nearby

These and other areas of interest as well as the associated proposed improvements for bicycle and pedestrians can be viewed in the constructability drawings in the appendix.

Implementation/ Funding Strategies

Completion of this feasibility study represents an important step forward toward implementing bicycle and pedestrian improvements in the Old Durham Chapel Hill Road corridor. The plans depicted in this report, however, are not suitable for contractors to use in construction. Furthermore, additional right-of-way may be needed from 65 parcels (a total of less than 2.9 acres) in order to realize the vision depicted in these drawings. Last, but certainly not least, the identified funding for construction is sufficient to build only a portion of the entire project, so additional funds or selective phasing of construction will be necessary.

The purpose of the Implementation Plan is to recognize these challenges and suggest strategies to address each challenge.

The metropolitan planning organization has secured $1.2 million for construction from the federal Surface Transportation Program – Direct Allocation (STP-DA). The MPO has set this project as its top priority for bicycle/pedestrian improvements. The State of North Carolina and the MPO have matched the federal funds with $400,000 in state funds and $300,000 in local funds. While there is currently $1.9 million available for improvements to Old Durham-Chapel Hill Road, this is not enough funding to make all the improvements recommended in this report. Therefore, the recommendations should be prioritized and the most essential improvements should be made first. Future implementation will require additional funding.

Some potential sources for future funding are listed below.

Probable Construction Cost and ROW Acquisition

A probable construction cost estimate (based on planning level unit cost estimates provided by NCDOT) was developed for the proposed improvements identified on the constructability drawings. The following major construction items are included.

On-road improvements (widening)	$2,080,000
10 foot multi-use path (asphalt)	$ 153,000
5 foot sidewalks (north side of road)	$ 94,000
5 foot sidewalks (south side of road)	$ 176,000
Two roundabouts	$ 600,000
Total:	$3,103,000

Right-of-way (ROW) requirements were also estimated for the project. A total of **2.86 acres of additional ROW will be needed** to accommodate the bicycle and pedestrian improvements along the corridor. For a detailed breakdown of probable construction costs and ROW requirements, see the appendix.

It should be noted that the two roundabouts may be funded using other sources. Construction of the Mt. Moriah roundabout is a requirement placed by the City of Durham on a local developer of the Patterson Place development. Also, the Pope Road roundabout has been identified as a potential for state "Small Urban" funds according to Durham city staff. This refocuses the construction cost of the project to ***$2,503,000****.*

Phasing Options

To match the project description with likely available funds, Kimley-Horn offers the following suggestions for splitting the overall project into constructible phases; that is, a project with logical terminii that could be built in phases yet not have the appearance of an unfinished project between phases.

Option 1 — Build phase 1 of the bicycle and pedestrian improvements from US 15/501 on the west to connect with the New Hope Creek and Greenway on the east. Kimley-Horn's opinion of probable construction cost for such a phase 1 is $1.92 million. Additional funds would still be necessary to cover right-of-way, utilities, survey, design and contingencies.

On-road Improvements (widening)	$1,780,000
10 foot Multi-use Path (north side)	$ 93,000
5 foot Sidewalks (north side of road)	$ 47,000
Total:	**$1,920,000**

Phase 2 would extend the project east from the New Hope Creek Greenway.

Option 2 — Build phase 1 of the project from US 15/501 on the west to Garrett Road on the east, building only the pedestrian improvements first. Kimley-Horn's opinion of probable construction cost for such a phase 1 is nearly $425,000, leaving funds for right-of-way, utilities, survey, design, contingencies, and perhaps a portion of the roundabout at Pope Road. Additional funds would still be necessary to come back and widen the road to provide bicycle lanes, which would be expedited because right-of-way would not be needed at that time.

Option 3 — Build phase 1 of the project from US 15/501 on the west to Garrett Road on the east,

building only the bicycle lanes first. Kimley-Horn's opinion of probable construction cost for such a phase 1 is roughly $2.1 million, leaving funds for any miscellaneous right-of-way, utilities, survey, design and contingencies. Additional funds would still be necessary to come back and acquire most of the right-of-way and build the sidewalks and multi-use path.

Option 4 — Prior to the next phase of project design, a decision will be made regarding the tradeoff between retaining the open ditches where they exist in this corridor or an option to install stormwater pipes in the ditch, cover them with fill, and install curb and gutter. Factors to consider in the decision-making process include the following:

- Environmental impact on degradation of water quality with the introduction of piped stormwater runoff
- Impacts on adjacent property owners, residents, and businesses from the additional right-of-way that would be needed to build the project with open ditches
- Public safety related to motorists running off the road into a ditch
- Aesthetics along the corridor

Consultation with environmental permitting agencies and NCDOT is needed, along with perhaps further study, to inform the decision-makers regarding environmental impacts. While right-of-way costs are being estimated for the open ditch option, curb-and-gutter would reduce the amount of right-of-way needed. A quick-sketch analysis prepared by Kimley-Horn suggests that if land values exceed $6 per square foot (or $250,000 per acre) in this corridor, then the added cost of installing stormwater pipes as well as curb and gutter would be well-spent to save on the right-of-way cost and aggravation to property owners. However, if land values do not exceed $6 per square foot then the MPO is advised to engage a right-of-way agent (city/town, state or private) to weigh the "real" costs of acquiring property in this corridor. The "real" cost should include benevolence factors that a city/town might encounter when negotiating with citizens over the use or acquisition of their land for public purpose. Benevolence factors weigh heavily when citizens learn of an alternative design (curb and gutter) that would lessen or perhaps avoid use or acquisition of their property.

Public safety issues are always taken into consideration with any roadway project. This study will consider these factors when treatments are recommended. Aesthetics also are a consideration. It is believed that aesthetics would be improved by filling in the ditches and installing street trees. However, state approval is not guaranteed since the introduction of trees near the street may pose a safety risk to motorists. This factor should be further explored.

Implementation/Funding

To improve Old Durham-Chapel Hill Road, the following is recommended:

- Request changes to the posted speed limit from NCDOT. The current posting of 40 mph should be changed to 35 mph, except between roundabouts at Pope Road and Mt. Moriah Road where a 20 mph posting is recommended.
- Pursue additional funds through related programs targeting bridge reconstruction projects, greenway improvements, and residential and commercial developments. Piggybacking on other program funds will stretch the project dollars.
- Pursue opportunities for additional matching funds in the future from federal, state, and local agencies and organizations.
- Seek Safe Routes to Schools funding for improvements near Githens Middle School.
- Work with health, safety, environmental, and pedestrian and bicycle advocacy organizations to obtain political support and possible grants. One possible sponsor could be Blue Cross/Blue Shield of North Carolina, an organization that is promoting physical activity and whose employees use this corridor to commute and travel between their various building sites.
- Coordinate conceptual plans with implementing agencies
  - NCDOT
  - TTA, DATA, Chapel Hill Transit
  - City of Durham and Town of Chapel Hill engineering and public works
- Continue to promote final conceptual plans to local businesses, residents, property owners and other stakeholders.

Promotion

Promoting walking and bicycling on Old Durham-Chapel Hill Road can help build political support and increase the potential for additional funding. Potential ideas for promotion include:

- Make an announcement of the pedestrian and bicycle improvements through the newspaper, television, press releases, and local agency websites
- Produce fliers about the health benefits of walking and bicycling. Include statements about how many calories a 1-mile walk or 3-mile bike ride along Old Durham-Chapel Hill Road will burn. Also consider including information about economic and environmental benefits of making trips by walking and biking.
- Distribute fliers about walking and bicycling on Old Durham-Chapel Hill Road to new apartment residents and at new store openings
- Hold a walk/bike to school day or other walking or biking event at Githens Middle School
- Start a Safe Routes to School program at Githens Middle School
- Organize a walk, run, or bicycle ride soon after the shoulders and sidewalks are added to the roadway
- List Old Durham-Chapel Hill Road as a roadway that has been improved for pedestrian and bicycle travel on the City of Durham, Town of Chapel Hill, DCHC, and Triangle J Council of Governments websites and bicycle maps
- Work with local restaurants to offer discounts to people who come by walking or biking rather than driving
- Take baseline pedestrian and bicycle counts at five main intersections in corridor. Take counts in the future to benchmark increases and build support for further improvements.

Remaining Issues

Outside of the efforts addressed in this feasibility study, the following remaining issues need to be carried into subsequent planning and design stages for resolution. These include:

- Construction administration — which public entity will manage the contract?
- Maintenance issues need to be addressed — specifically, will NCDOT or municipalities maintain sidewalks? How will bike lanes be maintained (i.e., on a routine schedule)? The difference in maintenance costs for curb-and-gutter vs. shoulder section needs to be explored.
- Roundabout design and implementation:
  - Coordinate with Ron Horvath on Mt. Moriah roundabout. The roundabout design may need to be shifted to the northeast quadrant in order to accommodate wide sidewalks on the southern side between the I-40 guardrail and travel lane.
  - Need to explore funding options for the Pope Rd. roundabout
- Address intersection issues at Sage/Scarlett/Old Durham-Chapel Hill/15-501:
  - Performance Auto SUD approved on June 27 by Chapel Hill Town Council; includes median design to block service road entrance at Sage/15-501 intersection — the design is contingent upon NCDOT approval (shown on sheet 1 in the appendix)
- Exploration of curb-and-gutter options:
  - Will it be cheaper to build curb-and-gutter vs. acquire ROW for current recommended design?
  - For shoulder sections, consider including curb and gutter at corners of intersections for better definition of curb ramps
- Utility Relocation:
  - Investigate the cost of utility relocations
  - If NCDOT administers project, they can require utility companies to move utilities without cost to public; local government doesn't have same authority.
  - NCDOT design standards will require many utility poles to be moved due to expansion of pavement width
- Bridge treatments:
  - Address Bike/Pedestrian Division's concerns with bollards at bridges
  - Colored pavement is recommended for shoulder sections on bridges
  - Investigate Bike/Pedestrian Division's interest in 10' travel lanes over I-40 bridge to allow 4-foot shoulders for bike and pedestrian traffic
- Right-of-way acquisition – 18 months would be needed for ROW appraisal and acquisition.

Appendix

Constructability Drawings

Public Workshop Fliers

User Survey

User Survey Results

Traffic Counts

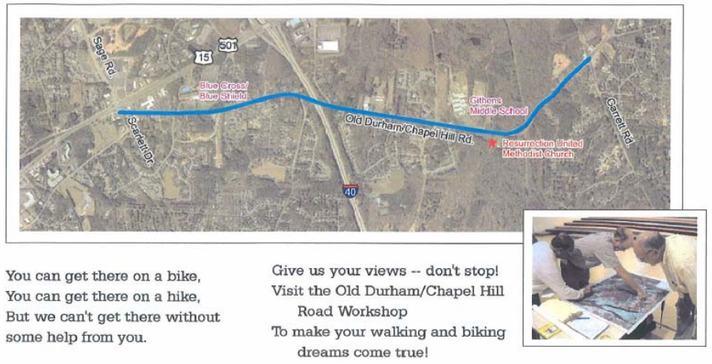
Crash Data

Statement of Probable Construction Costs

Proposed Design Criteria

ROW Acquisition

Public Workshop Fliers



You can get there on a bike,
You can get there on a hike,
But we can't get there without
some help from you.

Give us your views -- don't stop!
Visit the Old Durham/Chapel Hill Road Workshop
To make your walking and biking dreams come true!

Old Chapel Hill Road Bicycle/Pedestrian Corridor Study

Public Workshop

WHAT

A 2-day design charrette

The purpose of the study is to develop a plan to promote future connectivity and accommodation for pedestrians and bicycles.

WHERE

Resurrection United Methodist Church
4705 Old Chapel Hill Road, Durham

entrance to Resurrection United Methodist Church

WHEN

Friday, April 15: Noon to 5 PM
Saturday, April 16: 1 to 4:30 PM

Questions? Call Alison Carpenter, Bicycle Pedestrian Coodinator
City of Durham, (919) 560-4366

Old Chapel Hill Road Bicycle/Pedestrian Corridor Study

Public Open House

What

Open House
The Open House will provide an opportunity for the public to view maps and provide feedback on proposed bike and pedestrian improvements along the corridor. Drop in any time!

Where

Resurrection United Methodist Church
4705 Old Chapel Hill Road, Durham

When

Wednesday June 22: 5 p.m. to 8 p.m.

Questions? Call Alison Carpenter, Bicycle/Pedestrian Coordinator
City of Durham, (919) 560-4366

DCHC
Durham-Chapel Hill-Carrboro
METROPOLITAN
Planning Organization

User Survey

April 15, 2005

Old Durham/Chapel Hill Road Bike and Pedestrian Plan

User Survey

1. Do you live or work within the Old Durham/Chapel Hill Corridor? ☐ Yes ☐ No

2. What **kind of bicycling** do you do? (check all that apply)
- ☐ To work
- ☐ To school
- ☐ To visit friends or family
- ☐ For fitness/recreation
- ☐ To the bus stop

3. How **often** do you ride a bicycle?
- ☐ Daily
- ☐ Once or twice a week
- ☐ Once every 2-3 weeks
- ☐ 2-3 times a year
- ☐ I don't ride a bicycle

4. What is your general **skill level?**
- ☐ advanced
- ☐ basic
- ☐ child (under 12)

5. What is your **primary concern** when deciding where to ride? (check one)
- ☐ Shortest route to destination
- ☐ Pleasant route/scenic value
- ☐ Comfort/personal safety in traffic
- ☐ Safe/convenient bicycle parking
- ☐ Other _____

6. Would **bike lanes or trails** on Old Durham/Chapel Hill Road encourage you to make more short trips?
- ☐ Yes
- ☐ No

7. What affects your **decision to ride?** (check all that apply)
- ☐ Presence of bike paths or shoulders
- ☐ Amount of traffic on the road
- ☐ Speed of traffic
- ☐ Amount of large trucks and/or buses
- ☐ Number of major intersections
- ☐ Weather/time of day
- ☐ Bicycle parking at destinations

8. What are the **bicycling conditions** on Old Durham/Chapel Hill Road?
- ☐ Good
- ☐ Fair
- ☐ Poor

9. Do you go on **organized recreational bike rides?**
- ☐ Yes
- ☐ No

10. Where would you like to see **bicycle racks** installed? (check all that apply)
- ☐ Workplace
- ☐ Schools/Parks
- ☐ Public bus stops
- ☐ Mounted on public buses
- ☐ Other_____

11. Do you have **children** under the age of 16 in your household that ride bicycles?
- ☐ Yes
- ☐ No

(OVER)

April 15, 2005

12. (If the answer to Question 11 is Yes) where do you allow them to ride (either supervised or unsupervised)?
- ☐ Bike trails or paths
- ☐ Residential streets
- ☐ Major roads
- ☐ Other _____

13. What kind of walking do you do? (check all that apply)
- ☐ To work
- ☐ To school
- ☐ To visit friends or family
- ☐ For fitness/recreation
- ☐ To the bus stop

14. Which affects your decision to go on a walk? (check all that apply)
- ☐ Availability of sidewalks or trails
- ☐ Amount of traffic on the adjacent road
- ☐ Presence of crosswalks/pedestrian signals
- ☐ Number of major intersections
- ☐ Weather/time of day
- ☐ Other_____

15. What makes you decide where to walk? (check one)
- ☐ Shortest route to destination
- ☐ Scenic value of route
- ☐ Comfort/separation in traffic
- ☐ Personal safety/security
- ☐ Other _____

Please leave this survey form with the study team before you leave. Thanks again for your participation!

16. Are you in favor of **building** walkways and bikeways on Old Durham/Chapel Hill Road?
- ☐ Yes
- ☐ No

17. What are the walking conditions in your community?
- ☐ Good
- ☐ Fair
- ☐ Poor

18. Where do you have trouble crossing the street?

_____
_____
_____
_____
_____

19. Did this workshop help your understanding of Bike/Pedestrian issues along Old Durham/Chapel Hill Road?
- ☐ Yes
- ☐ No
- ☐ Somewhat

20. What is the **most important message** you would like to send to the study team?

_____
_____
_____
_____

(OVER)

User Survey Results

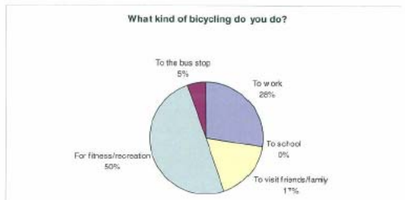
Old Durham/Chapel Hill Road Bike/Pedestrian Plan
(52 total surveys)

1. Do you live or work within the Old Durham/Chapel Hill Corridor?

	Number	Percentage
Yes	27	73%
No	10	27%

2. What kind of bicycling do you do?

	Number	Percentage
To work	16	28%
To school	0	0%
To visit friends/family	10	17%
For fitness/recreation	29	50%
To the bus stop	3	5%



3. How often do you ride a bicycle?

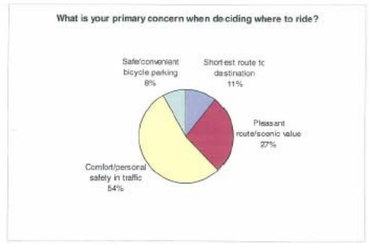
	Number	Percentage
Daily	7	19%
Once or twice a week	17	46%
Once every 2-3 weeks	3	8%
2-3 times a year	7	19%
I don't ride a bicycle	3	8%

4. What is your general skill level?

	Number	Percentage
Advanced	18	55%
Basic	15	45%
Child	0	0%

5. What is your primary concern when deciding where to ride?

	Number	Percentage
Shortest route to destination	4	11%
Pleasant route/scenic value	10	27%
Comfort/personal safety in traffic	20	54%
Safe/convenient bicycle parking	3	8%

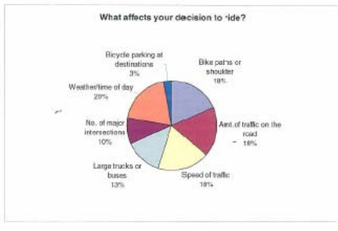


6. Would bike lanes or trails on Old Durham/Chapel Hill Road encourage you to make more short trips?

	Number	Percentage
Yes	28	82%
No	6	18%

7. What affects your decision to ride?

	Number	Percentage
Bike paths or shoulder	23	18%
Amt of traffic on the road	23	18%
Speed of traffic	23	18%
Large trucks or buses	17	13%
No. of major intersections	12	10%
Weather/time of day	24	20%
Bicycle parking at destinations	4	3%



8. What are the bicycling conditions on Old Durham/Chapel Hill Road?

	Number	Percentage
Good	0	0%
Fair	2	6%
Poor	32	94%

9. Do you go on organized recreational bike rides?

	Number	Percentage
Yes	15	42%
No	21	58%

10. Where would you like to see bicycle racks installed?

	Number	Percentage
Workplace	22	28%
Schools/Parks	23	29%
Public bus stops	12	15%
Mounted on public buses	20	25%
Other	2	3%

11. Do you have children under the age of 16 in your household that ride bicycles?

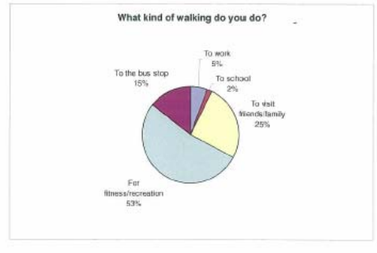
	Number	Percentage
Yes	12	34%
No	23	66%

12. (If the answer to Question 11 is Yes) Where do you allow them to ride?

	Number	Percentage
Bike trails or paths	10	43%
Residential streets	11	48%
Major roads	1	4%
Other	1	4%

13. What kind of walking do you do?

	Number	Percentage
To work	3	5%
To school	1	2%
To visit friends/family	14	25%
For fitness/recreation	29	53%
To the bus stop	8	15%



14. Which affects your decision to go on a walk?

	Number	*Percentage*
Availability of sidewalks or trails	33	35%
Amount of traffic on the adjacent road	21	22%
Presence of crosswalks/ pedestrian signals	9	10%
Number of major intersections	9	10%
Weather/time of day	21	23%
Other	0	0%

15. What makes you decide where to walk?

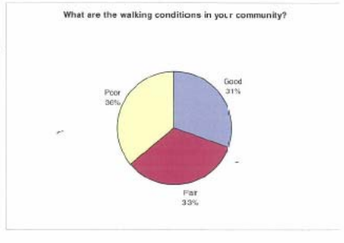
	Number	*Percentage*
Shortest route to destination	10	14%
Scenic value of route	19	26%
Comfort/separation in traffic	20	28%
Personal safety/security	22	31%
Other	1	1%

16. Are you in favor of building walkways and bikeways on Old Durham/Chapel Hill Road?

	Number	*Percentage*
Yes	35	100%
No	0	0%

17. What are the walking conditions in your community?

	Number	*Percentage*
Good	11	31%
Fair	12	33%
Poor	13	36%



18. Did this workshop help your understanding of Bike/Pedestrian issues along Old Durham/Chapel Hill Road?

	Number	*Percentage*
Yes	25	78%
No	5	16%
Somewhat	2	6%

19. Where do you have trouble crossing the street?

- Old Chapel Hill-Durham - Lakeside
- Five Oaks and Chapel Hill Road
- US15-501
- Intersection of Pope and Old Chapel Hill Road
- Between White Oak and Chapel Hill Road
- Airport Road
- I-40 Bridge
- Mt. Mariah
- Major Roads
- All intersections
- US15-501 at Scarlett Drive

20. What is the most important message you would like to send to the study team?

- Residents support this idea
- Keep Old Chapel Hill/Durham Road as a two lane road only
- Make 15-501 the speed corridor
- Get it constructed ASAP!
- Every street would benefit from safe walking and biking access
- Opportunities for biking on major roads improve public health
- Emphasis on slowing motor vehicle traffic
- Sidewalks are needed
- This is a good idea
- Use good signage

Traffic Counts

3: Chapel Hill Road & Garrett Road

Lanes, Volumes, Timings — Existing AM

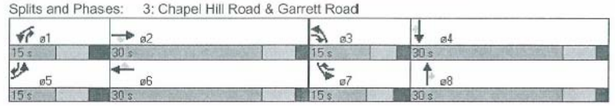
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			65			167			61
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3783			3881			3904			3280	
Travel Time (s)		86.0			88.2			88.7			74.5	
Volume (vph)	59	545	67	189	375	50	126	301	521	82	203	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lane Group Flow (vph)	64	592	73	205	408	55	137	327	566	89	221	61
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phases	5	2	3	1	6	7	3	8	1	7	4	5
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.0	23.1	13.1	15.0	23.1	13.5	13.1	23.0	15.0	13.5	23.0	15.0
Total Split (s)	15.0	30.0	15.0	15.0	30.0	15.0	15.0	30.0	15.0	15.0	30.0	15.0
Total Split (%)	17%	33%	17%	17%	33%	17%	17%	33%	17%	17%	33%	17%
Yellow Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	3.0	2.1	2.1	3.0	2.1	2.5	2.1	2.0	3.0	2.5	2.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None	None	None
Act Effct Green (s)	11.1	20.7	35.2	11.4	25.0	36.6	10.7	14.8	30.4	10.5	14.6	28.7
Actuated g/C Ratio	0.15	0.29	0.48	0.16	0.36	0.53	0.15	0.21	0.43	0.14	0.21	0.39
v/c Ratio	0.12	0.57	0.09	0.37	0.32	0.07	0.53	0.44	0.73	0.35	0.30	0.09
Uniform Delay, d1	28.6	20.9	0.0	27.9	18.1	0.0	30.9	25.8	12.6	30.1	25.1	0.0
Delay	29.8	22.4	3.1	30.0	20.4	3.2	31.7	25.8	14.1	31.2	25.4	4.5
LOS	C	C	A	C	C	A	C	C	B	C	C	A
Approach Delay		21.1			21.7			20.1			23.3	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.3			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 67.3%		ICU Level of Service B	

3: Chapel Hill Road & Garrett Road

Lanes, Volumes, Timings — Existing AM

Splits and Phases: 3: Chapel Hill Road & Garrett Road



3: Chapel Hill Road & Garrett Road

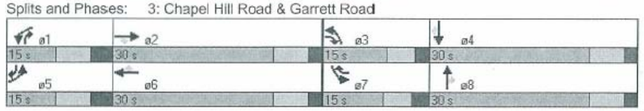
Lanes, Volumes, Timings — Existing PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139			120			221			128
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3783			3881			3904			3280	
Travel Time (s)		86.0			88.2			88.7			74.5	
Volume (vph)	89	461	128	345	487	110	70	334	266	64	338	118
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lane Group Flow (vph)	97	501	139	375	529	120	76	363	289	70	367	128
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phases	5	2	3	1	6	7	3	8	1	7	4	5
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.0	23.1	13.1	15.0	23.1	13.5	13.1	23.0	15.0	13.5	23.0	15.0
Total Split (s)	15.0	30.0	15.0	15.0	30.0	15.0	15.0	30.0	15.0	15.0	30.0	15.0
Total Split (%)	17%	33%	17%	17%	33%	17%	17%	33%	17%	17%	33%	17%
Yellow Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	3.0	2.1	2.1	3.0	2.1	2.5	2.1	2.0	3.0	2.5	2.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None	None	None
Act Effct Green (s)	11.1	19.8	33.8	11.4	24.1	37.6	10.2	15.5	31.1	10.4	15.7	29.8
Actuated g/C Ratio	0.15	0.28	0.46	0.16	0.34	0.52	0.14	0.22	0.44	0.14	0.22	0.41
v/c Ratio	0.19	0.50	0.17	0.67	0.43	0.14	0.31	0.46	0.35	0.28	0.46	0.18
Uniform Delay, d1	28.7	20.9	0.0	29.3	19.4	0.0	30.0	25.3	3.0	29.7	25.2	0.0
Delay	29.9	22.4	2.4	36.3	21.7	2.6	31.2	25.2	4.5	31.0	25.1	3.2
LOS	C	C	A	D	C	A	C	C	A	C	C	A
Approach Delay		19.6			24.8			17.6			20.9	
Approach LOS		B			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.7			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 21.1		Intersection LOS: C	
Intersection Capacity Utilization 53.9%		ICU Level of Service A	

3: Chapel Hill Road & Garrett Road
Lanes, Volumes, Timings
Existing PM

Splits and Phases: 3: Chapel Hill Road & Garrett Road



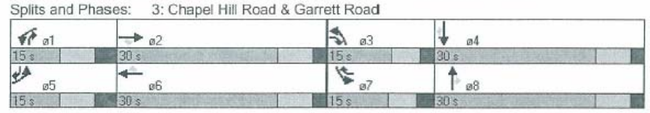
3: Chapel Hill Road & Garrett Road
Lanes, Volumes, Timings
Single EB LT - AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			85			167			61
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3783			3881			3904			3280	
Travel Time (s)		86.0			88.2			88.7			74.5	
Volume (vph)	59	545	67	189	375	50	126	301	521	82	203	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lane Group Flow (vph)	64	592	73	205	408	55	137	327	566	89	221	61
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phases	5	2	3	1	6	7	3	8	1	7	4	5
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.0	23.1	13.1	15.0	23.1	13.5	13.1	23.0	15.0	13.5	23.0	15.0
Total Split (s)	15.0	30.0	15.0	15.0	30.0	15.0	15.0	30.0	15.0	15.0	30.0	15.0
Total Split (%)	17%	33%	17%	17%	33%	17%	17%	33%	17%	17%	33%	17%
Yellow Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	3.0	2.1	2.1	3.0	2.1	2.5	2.1	2.0	3.0	2.5	2.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None	None	None
Act Effct Green (s)	11.1	20.7	35.2	11.4	25.0	38.6	10.7	14.8	30.4	10.5	14.6	28.7
Actuated g/C Ratio	0.15	0.29	0.48	0.16	0.36	0.53	0.15	0.21	0.43	0.14	0.21	0.39
v/c Ratio	0.24	0.57	0.09	0.37	0.32	0.07	0.53	0.44	0.73	0.35	0.30	0.09
Uniform Delay, d1	29.1	20.9	0.0	27.9	18.1	0.0	30.9	25.8	12.6	30.1	25.1	0.0
Delay	30.7	22.4	3.1	30.0	20.4	3.2	31.7	25.8	14.1	31.2	25.4	4.5
LOS	C	C	A	C	C	A	C	C	B	C	C	A
Approach Delay		21.2			21.7			20.1			23.3	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.3			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 67.3%		ICU Level of Service B	

3: Chapel Hill Road & Garrett Road
Lanes, Volumes, Timings
Single EB LT - AM

Splits and Phases: 3: Chapel Hill Road & Garrett Road



3: Chapel Hill Road & Garrett Road
Lanes, Volumes, Timings — Single EB LT - PM

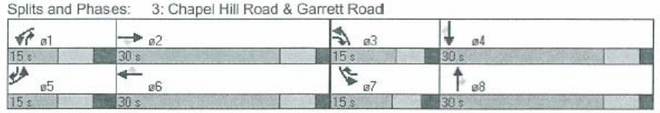
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139			120			221			128
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3783			3881			3904			3280	
Travel Time (s)		86.0			88.2			88.7			74.5	
Volume (vph)	89	461	128	345	487	110	70	334	266	64	338	118
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lane Group Flow (vph)	97	501	139	375	529	120	76	363	289	70	367	128
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phases	5	2	3	1	6	7	3	8	1	7	4	5
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.0	23.1	13.1	15.0	23.1	13.5	13.1	23.0	15.0	13.5	23.0	15.0
Total Split (s)	15.0	30.0	15.0	15.0	30.0	15.0	15.0	30.0	15.0	15.0	30.0	15.0
Total Split (%)	17%	33%	17%	17%	33%	17%	17%	33%	17%	17%	33%	17%
Yellow Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	3.0	2.1	2.1	3.0	2.1	2.5	2.1	2.0	3.0	2.5	2.0	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None	None	None
Act Effct Green (s)	11.1	19.8	33.8	11.4	24.1	37.6	10.2	15.5	31.1	10.4	15.7	29.8
Actuated g/C Ratio	0.15	0.28	0.46	0.16	0.34	0.52	0.14	0.22	0.44	0.14	0.22	0.41
v/c Ratio	0.36	0.50	0.17	0.67	0.43	0.14	0.31	0.46	0.35	0.28	0.46	0.18
Uniform Delay, d1	29.5	20.9	0.0	29.3	19.4	0.0	30.0	25.3	3.0	29.7	25.2	0.0
Delay	31.2	22.4	2.4	36.3	21.7	2.6	31.2	25.2	4.5	31.0	25.1	3.2
LOS	C	C	A	D	C	A	C	C	A	C	C	A
Approach Delay		19.8			24.8			17.6			20.9	
Approach LOS		B			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.1			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 21.1		Intersection LOS: C	
Intersection Capacity Utilization 53.9%		ICU Level of Service A	

H:\PN\011494030_Old_Durham_Bike-Ped\Traffic\Traffic Counts\PM - Single EB LT.sy6 Synchro 5 Report - 6/27/2005
SLP Page 1
kimleylvl7-ff51

3: Chapel Hill Road & Garrett Road
Lanes, Volumes, Timings — Single EB LT - PM

Splits and Phases: 3: Chapel Hill Road & Garrett Road



H:\PN\011494030_Old_Durham_Bike-Ped\Traffic\Traffic Counts\PM - Single EB LT.sy6 Synchro 5 Report - 6/27/2005
SLP Page 2
kimleylvl7-ff51

Crash Data

Crash Data Summary – Old Durham Road
From August 31, 2001 to August 31, 2004

The 2000-2002 North Carolina average crash rate for a 3-lane undivided State Route 393.36 crashes per 100 million vehicle miles traveled, according to the North Carolina Department of Transportation. Source: (http://www.doh.dot.state.nc.us/preconstruct/traffic/Safety/ses/rates/2002/statewide.pdf).

Severity Index = (76.8*(F+A) + 8.4*(B+C) + PDO)/ TOTAL CRASHES

Segments
Old Chapel Hill Road (Durham County)

- Total crash rate: 1758.04 crashes per 100 million vehicle miles traveled; This crash rate is extremely high for this type of roadway
  - 405 total crashes
  - 2 fatal crashes (0.49%)
  - 113 non-fatal injury crashes (27.90%)
  - 104 night crashes (25.68%)
  - 64 wet crashes (15.80%)
  - 19 DUI crashes (4.69%)
- Severity Index = 3.95
- Five pedestrian/bicyclist related crashes in the time period analyzed:
  - 9/30/2001 (Just west of Five Oaks Drive) – Passenger car leaving a parked position strikes a pedestrian; occurred at 9:00 pm under dark (no roadway lighting) conditions
  - 4/09/2003 (At intersection with Buchanon) – Passenger car traveling eastbound at 30 mph struck a pedestrian under daylight conditions (4:17 pm) at a stop and go traffic signal
  - 12/23/2001 (Just west of Garrett Road) – Passenger car traveling northbound at 45 mph struck and fatally wounded a pedestrian under dark (some roadway lighting) conditions; pedestrian was found to be under the impairment of alcohol
  - 05/24/2003 (At intersection of Garrett Road) – Passenger car traveling eastbound at 50 mph struck and fatally wounded a pedestrian under daylight conditions at 2:31 pm; pedestrian was found to be under the impairment of alcohol
  - 11/23/2002 (Just west of University Drive) – Sport utility vehicle traveling 30 mph struck a cyclist under daylight conditions; no injuries were reported

Old Durham Road (Orange County)

- Total crash rate: 313.35 crashes per 100 million vehicle miles traveled, this crash rate is slightly lower than the state average for this type of roadway
  - 11 total crashes
  - No fatalities
  - 6 non-fatal injury crashes (54.55%)
  - 1 night crash (9.09%)
  - 2 wet crashes (18.18%)
- Severity Index = 5.04
- No pedestrian/bicyclist related crashes in analysis period

1

Intersections
Old Chapel Hill Road and Mount Moriah Road (Durham County)

- Total crash rate: 98.75 crashes per 100 million vehicles entering
  - 13 total crashes
  - No fatalities
  - 4 non-fatal injuries (30.77%)
  - 2 night crashes (15.38%)
  - 3 wet crashes (23.08%)
- Severity Index = 3.28
- No pedestrian/bicyclist related crashes in analysis period

Old Chapel Hill and Garret Road (Durham County)

- Total crash rate: 425.40 per 100 million vehicles entering (extremely high)
  - 70 total crashes
  - No fatalities
  - 17 non-fatal injury crashes (24.29%)
  - 22 night crashes (31.43%)
  - 8 wet crashes (11.43%)
  - 1 DUI crashes (1.43%)
- Severity index = 2.80
- No pedestrian/bicyclist related crashes in analysis period

Old Chapel Hill and Farrington Road (Durham County)

- Total crash rate: 182.32 per 100 million vehicles entering
  - 16 total crashes
  - 6 non-fatal injury crashes (37.50%)
  - 6 night crashes (37.50%)
  - 2 wet crashes (12.5%)
  - 2 DUI crashes (12.5%)
- Severity Index = 8.05
- No pedestrian/bicyclist related crashes in analysis period

Old Durham Road and US 15-501 (Orange County)

- Total crash rate: 44.39 crashes per 100 million vehicles entering (extremely high)
  - 39 total crashes
  - 1 fatal crash (2.56%): 10/29/01, Angle crash occurred between vehicles traveling south at 40 mph and vehicle traveling west at 10 mph, driver of slower vehicle was found to be impaired by alcohol
  - 9 non-fatal injury crashes (23.08%)
  - 8 night crashes (20.51%)
  - 5 wet crashes (12.82%)
  - 4 DUI crashes (10.26%)
- Severity Index = 4.65
- No pedestrian/bicyclist related crashes in analysis period

2

Statement of Probable Construction Costs

STATEMENT OF PROBABLE CONSTRUCTION COST
KIMLEY-HORN AND ASSOCIATES, INC.

Estimated By EDH Checked By Date 6-21-05 Sheet 1 of 1

Project Title OLD DURHAM/CHAPEL HILL RD Job No.

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE MAT. & LAB.	ESTIMATED AMOUNT
1	ROAD WIDENING	20,400	SY	93 00±	1,897,200
2	10' MULTI-USE PATH (ASPH)	6210	SY	21 00±	130,400
3	5' CONCRETE SIDEWALK	8180	SY	30 00	245,400
	(65% ON SOUTHSIDE @ $160K)				
			TOTAL		2,273,000
			SAY		2,275,000

BASIS: MID YR 2005 COSTS
ROAD WIDENING $650,000/MI/12' LN
SW - $30 00/SY
10' ASPH MULTI USE PATH 2"/C" 21 00/SY
ROUNDABOUT - $250,000/per

COST - $ 2,275,000
+ 10% CONTINGENCY

TOTAL COST $ 2,500,000
(CONSTRUCTION COST ONLY)

* UNIT COSTS BASED ON NCDOT STANDARDS

TOTAL

"The Engineer has no control over the cost of labor, materials, or equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs, as provided here, are made on the basis of the Engineers experience and qualifications and represent the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from opinions of probable cost prepared for the Owner."

To be typed for final report

Proposed Design Criteria

PROPOSED DESIGN CRITERIA

STATE PROJECT: NA
F. A. PROJECT: NA — PAGE: 1 of 1
COUNTY: Durham
PROJECT DESCRIPTION: Bicycle / Pedestrian Improvements — DATE: June 7, 2005

PREPARED BY: Kimley-Horn and Associates, Inc.

ROUTE	Old Durham Chapel Hill Road		Comment	REFERENCE
LINE	L			OR REMARKS
TRAFFIC DATA				
ADT LET YR =				
ADT DESIGN YR =				
TTST				
DUALS				
DHV				
DIR				
CLASSIFICATION	Collector			NCDOT p. 1-1A
TERRAIN TYPE	Level			NCDOT p. 1-1D
DESIGN SPEED km/hr or mph	40			
POSTED SPEED km/hr or mph	35 mph			
PROP. R/W WIDTH m or ft	NA			
CONTROL OF ACCESS	N			
RUMBLE STRIPS (Y/N)	N			
TYPICAL SECTION TYPE	Shoulder			
LANE WIDTH m or ft	12 ft			
SIDEWALKS (Y/N)	Y			
BICYCLE LANES (Y/N)	Y			
MEDIAN WIDTH m or ft	N/A			
MED. PROTECT. (GR/BARRIER)	N/A			
SHOULDER WIDTH (total)	8			
MEDIAN m or ft	NA			
OUTSIDE w/o GR m or ft	8			NCDOT P. 1-4B
OUTSIDE w/ GR m or ft	11			NCDOT P. 1-4B
PAVED SHOULDER				
OUTSIDE TOTAL/FDPS m or ft	5		Bike Path	
MEDIAN TOTAL/FDPS m or ft	NA			
GRADE				
MAX.	7		Match Exist.	AASHTO p.427
MIN.	0.3		Match Exist.	AASHTO p. 242
K VALUE				
SAG	64		Match Exist.	AASHTO p: 426
CREST	44		Match Exist.	AASHTO p. 426
HORIZ. ALIGN.				
MAX. SUPER.	.08		Match Exist.	NCDOT 1-15
MIN. RADIUS m or ft	465		Match Exist.	AASHTO p. 145
SPIRAL (Y/N)	N			NCDOT Y1-11
CROSS SLOPES				
PAVEMENT (%)	2		Match Exist.	NCDOT 1-3B
PAVED SHOULDER (%)	5		Bike Path	
TURF SHOULDER (%)	3		See Attached Typical	
MEDIAN DITCH (%)	N/A			
DITCH TYPICAL (A,B,C)	* B			
TYPICAL SECTION NO.				

Design_Assumptions.xls

ROW Acquisition

Old Durham/Chapel Hill Road - ROW Acquisition

ROW Taken (From ROW_take.dgn)

ROW	Area (Square Feet)	Area (Square Yards)	Area (Acres)
A	0	0	0
B	550.3741	61.15267778	0.012634851
C	434.8868	48.32075556	0.009983627
D	281.1001	31.23334444	0.00645317
E	376.9223	41.88025556	0.008652945
F	48.6524	5.405822222	0.001116905
G	192.1499	21.34998889	0.004411155
H	122.8787	13.65318889	0.002820907
I	164.3291	18.25878889	0.003772477
J	157.2948	17.4772	0.003610992
K	0	0	0
L	229.4886	25.49873333	0.005268333
M	326.2725	36.2525	0.007490186
N	0	0	0
O	0	0	0
P	0	0	0
Q	0	0	0
R	0	0	0
S	0	0	0
T	5284.077	587.1196667	0.121305716
U	669.7631	74.41812222	0.015375645
V	0	0	0
W	0	0	0
X	180.9775	20.10861111	0.004154672
Y	1184.7644	131.6404889	0.027198448
Z	431.4718	47.94131111	0.00990523
A1	19.6379	2.181988889	0.000450824
B1	0	0	0
C1	0	0	0
D1	0	0	0
E1	0	0	0
F1	1599.6292	177.7365778	0.036722433
G1	922.8701	102.5411222	0.021186182
H1	947.9797	105.3310778	0.021762619
I1	814.9827	90.55363333	0.018709428
J1	1303.3837	144.8204111	0.029921573
K1	9195.3892	1021.709911	0.211097089
L1	7954.9894	883.8877111	0.182621428
M1	7386.7846	820.7538444	0.16957724
N1	1260.8563	140.0951444	0.028945278
O1	1204.3751	133.8194556	0.027648648
P1	1167.9918	129.7768667	0.026813402
Q1	1803.6007	200.4000778	0.041404975
R1	546.0947	60.67718889	0.012536609
S1	2970.2685	330.0298333	0.068187982
T1	268.7571	29.8619	0.006169814
U1	1904.8819	211.6535444	0.043730071
V1	602.9476	66.99417778	0.013841772
W1	8308.6524	923.1836	0.190740413
X1	3569.7662	396.6406889	0.081950555
Y1	2761.4376	306.8264	0.063393884
Z1	1210.7744	134.5304889	0.027795556
A2	232.1064	25.7896	0.00532843
B2	96.1452	10.6828	0.00220719
C2	0	0	0
D2	0	0	0
E2	0	0	0
F2	0	0	0
G2	0	0	0
H2	0	0	0
I2	0	0	0
J2	0	0	0
K2	0	0	0
L2	0	0	0
M2	0	0	0
N2	0	0	0
O2	0	0	0
P2	0	0	0
Q2	820.6288	91.18097778	0.018839045
R2	0	0	0
S2	1038.0736	115.3415111	0.023830891
T2	0	0	0
U2	0	0	0
V2	0	0	0
W2	0	0	0
X2	5340.7496	593.4166222	0.12260674
Y2	5523.5649	613.7294333	0.126803602
Z2	0	0	0
A3	2294.3922	254.9324667	0.052671997
B3	4643.815	515.9794444	0.106607323
C3	2730.4169	303.3796556	0.062681747
D3	819.9515	91.10572222	0.018823496
E3	0	0	0
F3	0	0	0
G3	2001.5787	222.3976333	0.045949924
H3	1031.6417	114.6268556	0.023683235
I3	258.4943	28.72158889	0.005934213
J3	0	0	0
K3	4544.9441	504.9937889	0.10433756
L3	6097.4745	677.4971667	0.139978753
M3	1065.3198	118.3688667	0.024456377
N3	1589.0823	176.5647	0.03648031
O3	2047.0984	227.4553778	0.046994913
P3	1542.2305	171.3589444	0.035404741
Q3	2255.7017	250.6335222	0.051783786
R3	1732.1628	192.4625333	0.039764986
S3	686.2372	76.24857778	0.015753838
T3	697.8889	77.54321111	0.016021325
U3	2888.5394	320.9488222	0.06631174
V3	1014.1195	112.6799444	0.02328098
W3	994.7533	110.5281444	0.022836393
X3	2337.246	259.694	0.053655785
Y3	0	0	0
Z3	0	0	0
A4	0	0	0
TOTAL	124685.8111	13853.97901	2.862392354

MEMORANDUM

To: Technical Coordinating Committee (TCC)
DCHC MPO

From: DCHC MPO Lead Planning Agency

Date: January 25, 2006

Subject: **Lead Planning Agency (LPA) Staff Report**

This memorandum provides a summary status of tasks for projects in the FY 2005-2006 Unified Planning Work Program.

- ✓ Indicates that task is complete.
- • Indicates that task is ongoing or not complete.

2005-06 Unified Planning Work Program (UPWP) Emphasis Projects

Collector Street Plan

- ✓ First public workshop, October 11, 5PM to 8PM.
- ✓ Draft current and future collector street network to be completed in November 2005.
- ✓ Evaluation of draft network to be completed in December 2005.
- • Public workshop scheduled for January 10, 2006
- • Development and Plan implementation strategies anticipated to be finished in January 2006.
- • Draft Collector Street Plan likely to be completed in late January or early February 2006.
- • Public input to occur during the months of January and February 2006.
- • Final Plan likely to be ready in late February.
- • Plan adoption (City of Durham, Durham County, Town of Chapel Hill and TAC).

Greenhouse Gas (GHG) Emission Inventory and Action Plan

- • Execute contract and give consultant Notice-to-Proceed – anticipated in January 2006 (delayed due to contract issues)
- • Formation of Technical Committee to be finalized in February 2006.
- • Formation of stakeholder committee (Advisory Committee) to be finalize in February 2006.
- • Kick off meeting for the study scheduled in February 2006
- • Establish Project Team List serve in February 2006

- Base Year data Collection and Information Gathering to be completed in January 2006.
- Data Analysis and Projection likely to be completed in January 2006.
- Stakeholders meeting scheduled in January 2006
- Determine and quantify historic and existing measures likely to be completed in February 2006.
- Identify new measures to be completed in February 2006.
- Identify GHG target and model reduction targets anticipated to be completed in March 2006.
- Criteria Air Pollutant (CAP) Analysis anticipated to be completed in March 2006.
- Formulate Action Plan anticipated to be completed in April 2006.
- Recommend reduction targets, strategies and action plan anticipated to be done by April 2006.
- Draft Report likely to be done in April 2006.
- Final Plan anticipated to be finalized in May 2006.
- Plan Adoption (Carrboro, Chapel Hill, Durham City, Durham County, Orange County and TAC) anticipated occurring during the months of May and June 2006.

Congestion Management System (CMS)/Mobility Report Card

- ✓ Consultants selected for the study.
- ✓ Data collection for the Mobility Report Card underway
- ✓ Data Collection for the Durham study to commence in early November. Temporary staffing hired for the data collection effort.
- Data Collection and field inventory to be completed by spring 2006.
- Level of Service analysis anticipated to be completed by April 2006.
- Development of CMS performance measures and guidelines likely to be completed in May 2006.
- Evaluation of congestion management strategies and development of cost-effective mitigation measures expected to be done by June 2006.
- Draft CMS State of System Report likely to be done in June 2006
- Public Comment and local review in months of June and July 2006
- Adoption anticipated in August 2006.

Travel Demand Model Update – Model Revision to Incorporate FTA New Start enhancement

- ✓ Consultant has been selected to assist the Triangle Regional Model (TRM) Service Bureau at ITRE in the model update.
- ✓ Data collection is currently underway.
- ✓ Migration of model from Tranplan to TransCad has been completed.
- ✓ Phase 1 (TTA new start model revision) completed in October 2005.
- Phase II TTA New Start model converted to TransCad in April 2006.
- Calibration of 2002 model in TransCad anticipated to be completed in June 2006.

Travel Behavior (household) Survey

- ✓ Consultant has been selected for the survey.
- ✓ Scoping and contract negotiations have been completed.
- ✓ Public involvement planning meeting on November 14, 2005
- ✓ Pilot and pre-test field data gathering completed.
- ✓ Pre-test statistical analysis and data summary to be finalized in December 2005.
- Survey on schedule to commence in spring of 2006.

Transit On-Board Survey

- ✓ Consultant has been selected for the survey.
- ✓ Scoping and contract negotiations have been completed.
- Pilot and pre-test expected to be done in spring of 2006.
- Survey to commence in spring of 2006. This project has be postponed to fall 2006

Transit Boarding and Alighting Counts

- Survey counts to be done in-house by the Lead Planning Agency (LPA) and MPO Transit operators.
- Counts to be completed by December 2005. This project is delayed due to regional coordination and safety issues on buses.
- Data analysis and tabulation expected to be completed in May 2006

Travel Time Survey/Speed Study

- ✓ Consultant has been selected for the survey.
- Scoping and contract negotiations still on-going.
- Field reconnaissance and data collection has been delayed and now expected to commence in January 2006.
- Survey to be completed in Spring of 2006.

Data Automation and Integration

- LPA staff is developing work scope and Request for Proposal (RFP). RFP has been delayed in order to complete time-critical Boarding and Alighting survey
- Consultant's solicitation is expected in January 2006.
- Project delayed to complete Boarding and Alighting Survey which is time-critical

Land-use Model development

- LPA staff is developing work scope and Request for Proposal (RFP). RFP has been delayed in order to complete time-critical Boarding and Alighting survey
- Consultant's solicitation is expected in January 2006

Comprehensive Pedestrian Plan for Durham

- ✓ Comprehensive sidewalk inventory currently underway
- ✓ Five (5) public workshops held July 11-22.
- ✓ Website established for the study – www.durhamwalks.org
- ✓ Fifth stakeholder meeting held on December 8.
- ✓ First newsletter released
- Policy and program review underway for Plan development
- Feedback compiled for project prioritization process
- Pedestrian facility inventory about 75% complete
- Analysis of existing codes and standards about 80% complete.
- Focus group meetings scheduled held November 2005 – January 2006.
- Method of project prioritization anticipated to be completed in January 2006.
- Analysis and evaluation of ancillary programs anticipated to be completed in March 2006.
- Funding analysis expected to be finalized by April 2006.
- Draft Comprehensive Pedestrian Plan anticipated to be done in April 2006.
- Final Plan, presentations and adoptions likely to occur in the months of May and June 2006.

Comprehensive Bicycle Plan for Durham County

- ✓ Consultant selected for the study
- ✓ Contract has been executed.
- ✓ Steering committee formation has been completed.
- ✓ Kick off meeting held on November 16, 2005.
- Four advisory committee meetings planned for the study.
- Three (3) public open house meetings planned. First public workshop scheduled for January 31, 4-8pm, in Durham City Hall.
- Three Newsletters planned. First newsletter distributed in November.
- Review of existing data, including GIS base mapping anticipated to be completed by February 2006.
- Analysis and evaluation of existing codes and policies anticipated to be completed in March 2006.
- Bicycle facility guidelines expected to be done by April 2006.
- Bicycle route network plan anticipated to be completed in May 2006.
- Draft Comprehensive Bicycle Master Plan anticipated to be completed in June 2006.
- Final Plan, presentation and adoption likely to occur in the months of August and September 2006.

Old Durham-Chapel Hill road Bicycle and Pedestrian Feasibility Study

- ✓ Technical analysis and evaluation of alternatives are completed
- ✓ Draft report being reviewed by the technical team and TCC.

- ✓ Meeting held between NCDOT and LPA staff to discuss project recommendations.
- ✓ LPA staff working to gather comments on the draft Plan from NCDOT, local jurisdictions and policy committee.
- ✓ Draft report has been reviewed by local governments.
- ✓ TCC Bicycle and Pedestrian subcommittee refined project scope and details, referred to TIP subcommittee to make final funding recommendation for the TCC.
- TAC approval anticipated in February 2006.

ITS Deployment Plan

- LPA working on the project scope
- Triangle regional stakeholder meeting scheduled to review scope and next steps.

2005-06 Unified Planning Work Program (UPWP) – Routine and Other Special Projects

MPO Environmental Justice (EJ) and Limited English Proficiency (LEP) Plan Integration

- Mandated by federal regulations
- Draft plan to be provided at the February 2006 TAC.

Update of the MPO Public Involvement Policy

- Suggested by the federal Certification Team
- To incorporate changes (public dissemination process) approved by the TAC at its January 12, 2005 meeting.
- Draft to be ready in January 2006 TAC.

MPO Expansion for the next LRTP Update

- Initiated dialogue with Person County, Granville County, Butner, Roxboro and Pittsboro
- Scheduling meeting with governing bodies of these jurisdictions.
- MPO expansion and revision of MOU expected to be completed by spring 2006.

Public Outreach for the East End Connector Planning and Environmental Study

- LPA working on the Public Involvement and Outreach Program for the East End Connector Planning and Environmental Study (NEPA).
- Development of mailing list database about 75% complete.
- Waiting for project schedule and time line from NCDOT.

Project proposed to be undertaken in the 2006-07 Work Program

Farrington Road/Stagecoach Road Corridor Study

This study would involve the following tasks:

1. Data collection and analysis
2. Traffic circulation plan (including a collector street system plan)
3. Sub-area modeling analysis and forecast of future demand
4. Alternative evaluation
5. Recommendation

NCDOT PROJECTS LOCATED IN DURHAM COUNTY - 1/3/2006

County	TIP #	Route	Location Description	Contract Amount	Length	Contractor Name	Resident Engineer	RE Ph. #	Contract Completion	Scheduled Progress	Actual Progress	Estimated Completion
Durham	MA-37652	CORNWALLIS RD	WIDENING AND RESURF OF CORNWALLIS RD FROM NC-55 TO MIAMI BLVD.	$ 1,581,423.06	3 miles	Rea Contracting, LLC	Phillip R. Johnson, PE, PLS	(919) 678-0444	11/10/2005	100%	91.77%	12/12/2005
Durham, Chatham	B-2963	STAGECOACH RD	BRIDGE ON STAGECOACH RD OVER NEW HOPE CREEK	$ 2,012,486.60	0.528 miles	C C Mangum Company LLC	Phillip R. Johnson, PE, PLS	(919) 678-0444	9/27/2005	100%	99.09%	11/17/2005
Durham	B-3451	ERWIN RD	BRIDGE ON ERWIN RD OVER PRONG OF MUD CREEK.	$ 1,496,599.25	0.135 miles	C C Mangum Company LLC	Aaron V. Earwood, PE	(919) 560-6857	11/01/2005	100%	85.51%	12/15/2005
Durham	I-306C	I-85	WIDENING OF I-85 FROM EAST OF COLE MILL RD TO WEST OF BROAD STREET.	$ 66,628,382.65	3.416 km	Granite Construction Company	Aaron V. Earwood, PE	(919) 560-6857	12/31/2006	86.00%	75.70%	12/30/2006
Durham	I-306DB	I-85	WIDENING OF I-85 FROM WEST OF BROAD STREET TO WEST OF CAMDEN AVE.	$ 73,297,064.77	4.093 km	Granite Construction Company	Aaron V. Earwood, PE	(919) 560-6857	12/31/2004	91.50%	92.53%	5/19/2006
Durham	I-306DC	I-85, US-70	WIDENING OF I-85 FROM WEST OF CAMDEN AVE TO NORTH OF MIDLAND TERRACE.	$ 48,903,200.51	2.794 km	Granite Construction Company	Aaron V. Earwood, PE	(919) 560-6857	12/28/2003	100%	96.61%	12/31/2005
Durham	I-3306B	I-40	WIDENING OF I-40 FROM ORANGE CO LINE TO DURHAM FREEWAY.	$ 44,790,284.74	10.837 miles	Granite Construction Company	Phillip R. Johnson, PE, PLS	(919) 678-0444	12/14/2003	100%	99.17%	08/24/2006
Durham, Wake	R-2000AB/AC	I-540	CONSTRUCTION OF I-540 FROM RESEARCH TRIANGLE PARK EAST LIMITS TO I-40.	$ 68,368,301.43	5.346 km	The Lane Construction Corp.	Phillip R. Johnson, PE, PLS	(919) 733-9499	08/01/2007	57.00%	65.12%	08/01/2007
Durham	R-2904	NC-54	WIDENING OF NC-54 FROM DAVIS DR TO MIAMI BLVD.	$ 3,579,727.08	0.786 miles	C C Mangum Company LLC	Robert J. Downes, III	(919) 562-7000	08/01/2006	7%	6.51%	08/01/2006
Durham, Wake	R-2906A/C	NC-55	WIDENING OF NC-55 FROM NORTH OF US-64 IN WAKE COUNTY TO CORNWALLIS RD.	$ 34,668,947.33	11.634 miles	Blythe Development Co	Phillip R. Johnson, PE, PLS	(919) 678-0444	06/01/2006	85.50%	66.70%	06/01/2006
Durham, Gran, Pers, Wake	R-4404	US-64	DIVISIONWIDE GUARDRAIL - US-15 / 501, US-64, US-70, US-158 & NC-147.	$ 1,138,560.10	28.5 miles	Elderlee Inc	Phillip R. Johnson, PE, PLS	(919) 733-9499				
Durham	R-4752	RED MILL RD	WIDENING AND RESURF OF RED MILL RD FROM SOUTH OF I-85 TO TEKNIKA PKWY.	$ 1,787,196.00	4.37 miles	Rea Contracting, LLC	Aaron V. Earwood, PE	(919) 560-6857	12/12/2005	100%	91.54%	12/22/2005
Durham	U-3309B	ALEXANDER DR	WIDENING AND RESURF OF ALEXANDER DR FROM EAST OF DURHAM FWY TO MIAMI BLVD.	$ 3,065,281.82	0.78 miles	W. E. Garrison Co., Inc.	Bob Shultes	(919) 840-0914	10/15/2003	100%	96.90%	12/31/2005
Durham	U-4446	DURHAM FRWY	ITS WORK ON DURHAM FREEWAY FROM I-40 TO I-85.	$ 1,245,283.29	22 miles	Viasys Services, Inc	Bob Shultes	(919) 840-0914	10/15/2005	99.99%	76.82%	10/15/2005

PROGRESS REPORTS MAY BE FOUND ONLINE AT
http://apps.dot.state.nc.us/constructionunit/proglocreport/ProgLocSearch.aspx

Durham wary of transit corridor agreement

By Ray Gronberg, The Herald-Sun
January 8, 2006 7:57 pm

DURHAM -- Durham officials say they're going to try to soften a proposed agreement with Chapel Hill and the Triangle Transit Authority that now requires them to force developers to provide easements for an inter-city transit corridor.

The objections are coming from the city government, whose legal office says that the agreement would tie the City Council's hands in ways that undercut its authority under state and local law.

As drafted, the agreement "seems a mandate that those decisions be made by council rather than considered by council," Assistant City Manager Ted Voorhees told members of the Joint City/County Planning Committee last week.

The deal is an outgrowth of a regional transportation-planning group's attempts last year to tinker with the routing of a prospective transit corridor that would run between Durham and Chapel Hill. The corridor once crossed the site of Creekside Elementary School, and Durham officials wanted it moved to assure that they'd be able to place a second school there someday.

They and their counterparts from Orange County have agreed to make the line hug Interstate 40 in the Farrington Road area, but formal approval of that remains pending.

Chapel Hill officials, some of them at least, are leery of the move because they don't think the City Council has been tough enough about forcing developers to hew to the region's transit planning. The concern dates back a few years and grew out of the council's decision to allow a big-box retailer, Target, to replace the old South Square Mall in an area that was supposed to accommodate a transit stop and high-density construction to support it.

The rerouting of the corridor near Creekside has also drawn suspicion from officials on the Chapel Hill side of the county line because it seems to benefit at least one developer who's trying to get a townhouse project approved for land next to the school.

Matters came to a head in October when members of the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization debated the terms of the agreement that would seal the rerouting of the transit corridor.

Durham officials turned in a draft that said local governments should seek easements for the corridor where it's "permissible under their statutory planning authority," a qualifier they proposed because local law limits the authority they have to tinker with development proposals late in the review process.

Officials on both sides of the line agree that easements are a better way to save land for transit corridors because they're guaranteed by a deed. A less-formal "reservation" on a permit map isn't as good, they say, because it can be undone by a single council vote.

Chapel Hill officials, however, objected to the "where permissible" qualifier because it seemed to them like a loophole city officials could use to evade the easement requirement.

They didn't give much credit to the countering argument about the city's legal authority because the land-use law in Chapel Hill gives the Town Council much more latitude than Durham's to negotiate the details of a development proposal with its sponsor.

The difference in outlook was the source of some puzzlement during last week's Joint City/County Planning Committee meeting.

"Does Chapel Hill play by the same rules we do?" County Commissioner Becky Heron said.

At any rate, as talks between the governments unfolded, "The earlier version [of the draft] wasn't as prescriptive: It encouraged certain action and that certain things be considered," Durham Transportation Manager Mark Ahrendsen said. "That wasn't strong enough for Chapel Hill, and they wanted to bind future decisions. We advised that was problematic at the time. The city attorney's office has come back that it's legally impermissible to bind those decisions."

Members of the Joint City/County Planning Committee -- a panel that includes three City Council members, three County Commissioners and the chairman of the Durham Planning Commission -- agreed to let administrators try hammering out a counterproposal.

They tried during a staff meeting on Friday. Details are still pending, but the "intent is to preserve that spirit of regional cooperation and review and comment," Voorhees said. "That's where we're headed."

URL for this article: http://www.heraldsun.com/durham/4-687391.html

City seeks funds for East End Connector

By Ray Gronberg, Herald-Sun, 12 January 2006

Durham officials are pressing the state Department of Transportation to make sure the long-delayed East End Connector receives construction funding in the next edition of the state's seven-year road-building program.

Paying to build the 2-mile link between the Durham Freeway and U.S. 70 would cost the agency almost $65 million. But Durham leaders say it's time for the community to reap some benefit from the state's efforts to build loop roads around its major cities.

"Over the next seven years, there's a little over $1 billion [for loops], and we want one-tenth of that," said Mark Ahrendsen, the city government's transportation manager. "Given that there are 10 loop cities, that's not an unreasonable request."

Ahrendsen and other local leaders tried to drive that point home Monday during a meeting with state Transportation Secretary Lyndo Tippett, a senior aide to Gov. Mike Easley, and a variety of top administrators at DOT.

State officials listened to Durham's case but made no promises. They're scheduled to release a draft of the 2007-13 construction program in April.

The two sides agree on the importance of the project to Durham and the Triangle, State Highway Administrator Len Sanderson said.

"I thought they made a very good presentation, and from our standpoint, not judging it against other projects, but looking at that project, and looking at the region and its transportation needs, it's a good project," said Sanderson, who participated in Monday's meeting.

Durham leaders have been urging DOT to build a link between the freeway and U.S. 70 since the late 1950s, and say they consider it the oldest unfunded highway project in the state.

The idea is to run a new stretch of highway toward U.S. 70 from the Durham Freeway starting from a pointabout a mile south of the freeway's existing interchange with Briggs Avenue. The connector would cross a mostly vacant stretch of land bracketed by Carter Avenue, Rowena Avenue and East End Avenue before joining U.S. 70.

The connection to U.S. 70 would give motorists a way to travel between northern Durham and Research Triangle Park, and provide a now-missing link between interstates 40 and 85.

Like Sanderson, Ahrendsen thinks local officials and DOT appear to be on the same page on the basics.

"I don't think there's any disagreement on the need for the project, and [on] the general design and scope for the project," he said.
The barrier to the project's construction has been its cost, and a bit of politics.

The East End Connector is a fairly complicated project for its size because DOT will have to build two major interchanges and at least one railroad crossing, factors requiring a lot of expensive bridge construction, Sanderson said.

There's also no shortage of competition for the state's loop-building money.

Seven cities -- Asheboro, Charlotte, Greensboro, Winston-Salem, Durham, Raleigh and Wilmington -- received a claim to those dollars when state officials established the loop program in 1989.

Two years ago, legislators also made Fayetteville, Greenville and Gastonia eligible for the program.

Sanderson said it's too soon to say how the East End Connector will stack up in the competition for funding this spring.

To date, much of the loop money has flowed to projects in Raleigh, Greensboro and Charlotte, Ahrendsen said.

"They had projects ready to go, and, understandably, that's where the dollars went. It took our community awhile to come to consensus," Ahrendsen said, alluding to the long debate over another potential bypass, Eno Drive.

Monday's meeting was orchestrated by Durham lawyer Ken Spaulding, a member of the state Board of Transportation. He said Durham has to make the case for the East End Connector now rather than waiting on the draft construction program.

"It's a lot more difficult to try to undo something where you'll be taking funds away from another [DOT] division's projects," Spaulding said. "My feeling was to get on this early and try to get on in rather than try to deal with it after the fact."

Ahrendsen and Sanderson said about $150 million in loop money will be up for grabs in the next edition of the road program.

The current edition of the program earmarks about $20 million for right-of-way acquisition and other preliminaries to the road's actual construction. The extra funding Durham is requesting is what engineers need to actually follow through and build it.

We could tax the odometer, not the gas gauge

MICHAEL L. WALDEN
NEWS & OBSERVER
JANUARY 13, 2006

Think of this future. Hybrid vehicles, averaging 70 miles per gallon, are used by 30 percent of drivers. Another 10 percent use hydrogen, an exciting new fuel. The remaining drivers use highly efficient gas-powered vehicles. Because the use of gasoline has declined so much, oil imports have dwindled and gas costs only $1 a gallon.

This is a future many dream of, and it may be one we eventually reach. The demand for hybrids is jumping, fuel efficiency is becoming a higher priority for drivers and a car powered by a hydrogen fuel cell is being tested in California.

Sounds great, right? We help the environment, we reduce our dependence on gasoline and oil and we still maintain the independence provided by the automobile. Could there be anything wrong with this picture?

Unfortunately, there is one downside. Funding for the maintenance and construction of highways is dependent on the gasoline tax, assessed on a per gallon basis. But as fuel efficiency improves and gas consumption per mile driven falls, public monies for highways shrink.

Of course, a solution would be to increase the tax rate per gallon to counteract the effects of improved fuel efficiency. Yet any increase in the gas tax faces stiff opposition, as evidenced by today's debate over the three cent hike that took effect in North Carolina on Jan. 1. Furthermore, additional improvements in fuel efficiency would necessitate more increases in the gas tax rate.

Yet by many reasonable estimates, North Carolina faces a significant backlog of road projects to keep pace with growth. Shortfalls in highway funding for construction and maintenance translate into more congestion and vehicle repair bills.

Therefore, the time may have come to consider a new way of funding highway spending -- one that replaces the gas tax and eliminates its problems. One candidate is a mileage tax.

A mileage tax charges drivers on how many miles they drive, not how much gas (or other fuel) they use. As such, it is a true user fee, since a driver's use of the roads is directly related to how many miles he or she drives. Since the mileage tax is independent of the type of fuel used and fuel efficiency achieved, it won't be affected by the use of gasoline alternatives, hybrid vehicles or gains in fuel efficiency.

Implementing a mileage tax would be relatively easy. Global positioning devices, costing about $100, would be placed in every North Carolina-registered vehicle. The device would record drivers' in-state mileage, and the latest information would be relayed via

satellite to service stations when drivers refuel. The mileage tax would then be added to the fuel bill. Out-of-state drivers without a device would be charged a traditional gas tax.

As with any tax proposal, there are issues. One is privacy. Could the collection of mileage data by the government be used to track the movements of drivers?

Advocates of such a tax say no. They claim the only information collected would be the total in-state mileage since the last refueling, not where a driver has been and for how long.

Others raise an environmental concern. Since a mileage tax would negate the savings in the gas tax achieved by drivers using highly fuel-efficient vehicles, they worry that the tax would discourage the purchase of such vehicles.

Mileage tax supporters have two rejoinders. First, fuel-efficient vehicles cause wear and tear on roadways and create congestion, just like fuel-inefficient vehicles, so fairness implies drivers of all types of vehicles should "pay their own way." Second, there are other substantial financial incentives for purchasing fuel-efficient vehicles, including direct savings on gas expenditures and tax credits for the purchase of hybrid cars.

A further advantage of the mileage tax is its versatility. Lighter vehicles, which cause less wear on highways than do heavier vehicles, could be charged a lower mileage tax. To encourage car pooling and mass transit, the tax could be higher for vehicles using more congested roads. To achieve this, though, would require that more detailed driving information be recorded.

Our transportation system will likely undergo dramatic changes in the next generation, making the gas tax a less reliable revenue source for highway projects. The mileage tax is a logical successor. Transportation policy-makers can get ahead of the curve by beginning a study of this alternative today.

(Michael L. Walden is a William Neal Reynolds distinguished professor in the Department of Agricultural and Resource Economics at N.C. State University. His latest book is "Smart Economics: Commonsense Answers to Fifty Questions About Government, Taxes, Business, and Households.")

Published: Jan 19, 2006 12:30 AM
Modified: Jan 19, 2006 02:32 AM

Study paves way for toll road

Proposed turnpike would save time for RTP commuters

BRUCE SICELOFF, Staff Writer

The proposed Triangle Parkway, barely three miles long, would trim only a few minutes off the morning drive to work. Is it worth a $1 toll?

Apparently so. A new financial study says thousands of Research Triangle Park workers would gladly pay that much for a faster commute -- generating enough money in tolls to cover most of the cost of building it.

The N.C. Turnpike Authority, which released what it called preliminary findings Wednesday, hopes to start building the north-south freeway through RTP by 2008 and to open it by 2010.

New cost estimates put construction of the Triangle Parkway between $124 million and $148 million. The financial study by Wilbur Smith Associates, a South Carolina-based engineering consultant, predicted that toll revenues would cover about two-thirds of that cost.

Design revisions and cost details still must be worked out. A more exhaustive financial study will be needed before Wall Street lenders agree to put up construction money that would be repaid from toll collections.

And the Turnpike Authority, authorized by the General Assembly to build up to nine toll roads and bridges across the state, would have to find other funds for the costs not covered by tolls.

"I think it's achievable, but we've got a lot of work to do," said Robert D. Teer Jr. of Durham, an RTP developer who serves on the turnpike authority. "Hopefully, by midyear, we'll have a good idea whether we can do Triangle Parkway."

The $200,000 study predicted that with a toll starting at $1, the parkway would attract about 14,000 cars a day in its first years.

With heavy residential and job growth expected south of RTP during the coming decades, the parkway's daily car count would grow to 52,000 by 2030, the study said. By then, with the toll bumped up to $2 to keep pace with inflation, the Turnpike Authority would be raking in $37 million a year from drivers.

Edward J. Regan III of New Haven, Conn., a Wilbur Smith senior vice president, predicted that 75 percent of Triangle Parkway tolls would be collected electronically, using technology that lets drivers pay without having to slow down for toll plazas.

Toll collections could cover between $71 million and $94 million in construction costs, he said. That prediction depends on what Regan called a "risky" forecast for strong growth. It assumes tolls would be collected for the next 40 years.

"Potentially, two-thirds of the project cost can be handled with tolls -- and that's a pretty significant portion, given this age of scarce tax resources," Regan said.

Research Triangle Park's founders planned a north-south freeway nearly 50 years ago -- before Interstate 40 and the I-540 Outer Loop were built -- and set aside land for the right-of-way. State highway engineers factored the Triangle Parkway into their calculations when they designed the I-540 Outer Loop near RTP.

The parkway would extend N.C. 147, the Durham Freeway, south from I-40 through RTP to I-540, now under construction just south of the park. Plans include interchanges at Hopson Road and Davis Drive.

Many commuters from Raleigh and other points east of RTP would take I-540 to the Triangle Parkway -- entering the park from the southern end, along with drivers from the south. Commuters from the west would use the northern end of the parkway.

Joseph A. Freddoso, site manager for Cisco Systems in RTP, welcomed the prospect of a new parkway. Commuters will decide whether it's worth it, he said.

"All of our employees will weigh the time savings versus the cost, and they'll make the best decisions for themselves," he said.

Plans call for stopping the Triangle Parkway at I-540, but Regan's report included traffic calculations for a proposed extension that would take the parkway another mile south to Morrisville's McCrimmon Parkway.

The McCrimmon extension would add about 20,000 cars to the daily traffic count and $6 million to annual toll collections by 2030, Regan said.

Morrisville developers and town officials have lobbied for the McCrimmon extension over the past two years. The Turnpike Authority voted to add it and then, last fall, to cut it from the plans. The issue is still up in the air, along with other details including what tolls drivers would pay.

"The question is cost and revenue," said David Joyner, the turnpike authority director. "The revenue from extending it to McCrimmon looks very positive, but the engineering work would be difficult."

Similar financial studies are expected this spring for other proposed toll roads including the planned 29-mile extension of Raleigh's Outer Loop into southern Wake County.

Staff writer Bruce Siceloff can be reached at 829-4527 or bruce.siceloff@newsobserver.com.