APPENDIX A
COMMENTS

ORGANIZATION OF APPENDIX A

A-1. Comments since the Final EIS

A-2. Comments on the Final EIS

A-3. Citizens Informational Workshop Materials

Scanned copies of the original documents received are included in this appendix, with the assigned document number placed in the upper right corner of the letters. A table of contents is provided at the beginning of each sub-appendix that list the documents included in that sub-appendix. Each document was reviewed, and comments responded to are bracketed and numbered in the scanned documents. Not all statements made in the documents require a response. Comment response tables are provided following each document.

Two Citizens Informational Workshops were held in June 2012. A meeting summary, along with the presentation slides presented at the meetings and the comment forms received are included in **Appendix A-3**.

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APPENDIX A-1

COMMENTS SINCE THE FINAL EIS

Document Number	Agency/Organization	Date	Page Number
i001	A Closer Look at US 74: Challenges and Opportunities	07/03/13	A1-1
i002	Southern Environmental Law Center	03/06/13	A1-29
i003	Southern Environmental Law Center	12/03/12	A1-42
i004	Southern Environmental Law Center	11/30/12	A1-44

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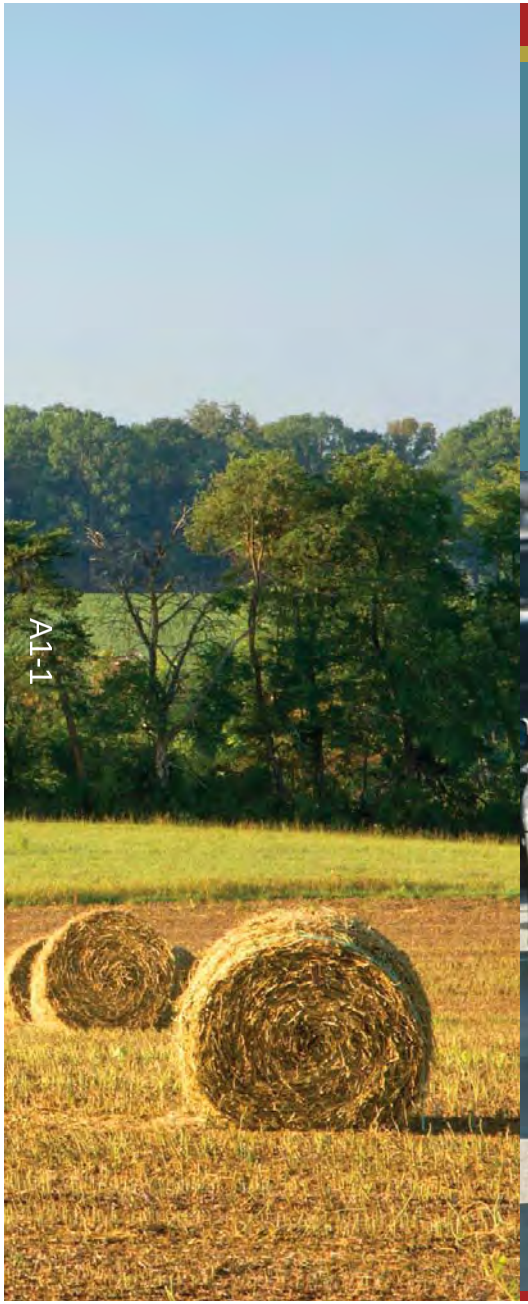

A1-1

A CLOSER LOOK AT US 74: CHALLENGES & OPPORTUNITIES

Southern Environmental Law Center

O'Connell & Lawrence, Inc., prepared this report at the request of the Southern Environmental Law Center to assist in their review of the proposed Monroe Bypass. O'Connell & Lawrence is a multidisciplinary firm which provides construction consulting, civil engineering, and surveying services to a broad range of both public and private sector clients. Its staff consists of an experienced group of registered engineers, surveyors, and construction specialists with expertise in a wide variety of disciplines. The Southern Environmental Law Center is a non-profit organization dedicated to protecting natural resources and public health in the South.

For additional copies of this report, or for more information about SELC, please visit our website or contact:

Southern Environmental Law Center
Chapel Hill Office
601 West Rosemary Street, Suite 220
Chapel Hill, NC 27516-2356
Phone 919-967-1450
Fax 919-929-9421
SouthernEnvironment.org

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A CLOSER LOOK AT US 74: CHALLENGES & OPPORTUNITIES

i001

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i001

EXECUTIVE SUMMARY

The conclusions and opinions expressed in this report were reached with a reasonable degree of engineering certainty.

The Stantec report, commissioned by the North Carolina Department of Transportation, highlights potential improvements to US 74, including signal timing optimization, modifications to signal phasing, turn lane storage expansion/addition, and lane modification, that are projected to significantly reduce overall delay.

The proposed revisions are projected to provide substantial time-delay benefits to local residents over an eight-year window. Stantec's study should be expanded to determine if delay benefits will sustain over a longer timeframe.

O'Connell & Lawrence, Inc. recommends the Wilbur Smith Associates origin-destination study be modified by increasing the number of survey collection points and increasing the time spent collecting origin-destination data. OCL also recommends a separate commercial driver origin-destination study be performed to highlight the differences between passenger vehicle and commercial vehicle traffic patterns.

Information obtained in Stantec's updated delay study and WSA's revised Origin-Destination study should be provided to local decision-makers so an informed decision about the long-term viability of US 74 as a means of providing high-speed, reliable transportation in the area southeast of Charlotte, NC, can be made. Additional study is required to determine if improvements to US 74 could assist in addressing the stated purposes of the Monroe Connector/Bypass.

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INTRODUCTION

Description of US 74 and Associated Reports

US 74, an existing multi-lane divided highway, travels southeast of the city center of Charlotte, NC, in the direction of Wilmington, NC. US 74 is part of the North Carolina Department of Transportation (NCDOT) Strategic Highway Corridor (SHC) and is known as Corridor 24. The section of US 74 reviewed in this report stretches through Union County, NC, from the intersection with I-485 (the Charlotte Outerbelt) to just beyond Wingate, NC. The reviewed location of US 74 is shown in Figure 1 below. The surrounding area is developed with residential, commercial and industrial properties and site/traffic improvements accompanying such development.

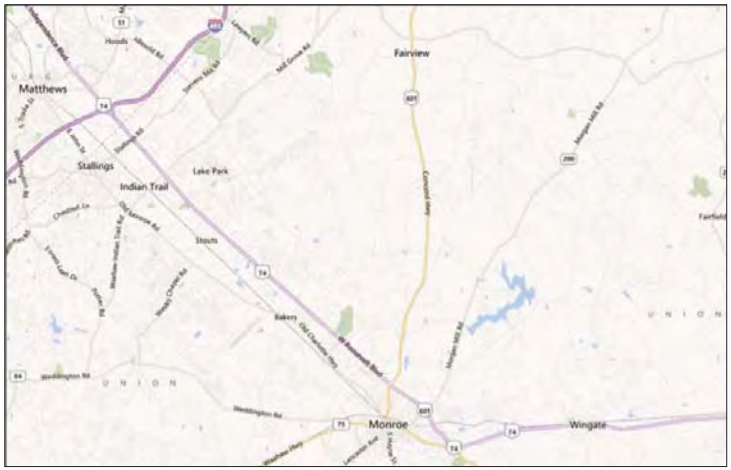

Figure 1 – Location Map

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Stantec Consulting Services, Inc. (Stantec) prepared a study of existing US 74 in 2007 entitled the "US 74 Corridor Study" (Stantec report). This study was commissioned by NCDOT. In this study, Stantec reviewed an existing stretch of US 74 from the Charlotte Outerbelt to Highway 601 South. Stantec developed a series of short-term and long-term recommendations for the corridor with the goal of extending the long-term viability of US 74. Stantec used overall delay, defined as the total time spent by a vehicle in queue and lost by having to accelerate and decelerate, and Level of Service (LOS), a common metric used to provide a description of the level of flow at various intersections, as their metric for determining whether the recommendations would provide overall benefits to local users of US 74. O'Connell & Lawrence, Inc. reviewed Stantec's recommendations, detailed later in this report, and provided recommendations on how the study should be improved and expanded.

WSA prepared a report entitled "Final Report – Proposed Monroe Bypass/Connector Comprehensive Traffic and Revenue Study" for the North Carolina Turnpike Authority (NCTA). This report, dated October 22, 2012, details the Origin-Destination Study (O-D Study), a traffic study performed to determine the travel patterns of a local populace, conducted by WSA personnel. OCL reviewed the O-D Study performed by WSA and has commented on both the overall quality/thoroughness of the study and proposed recommendations

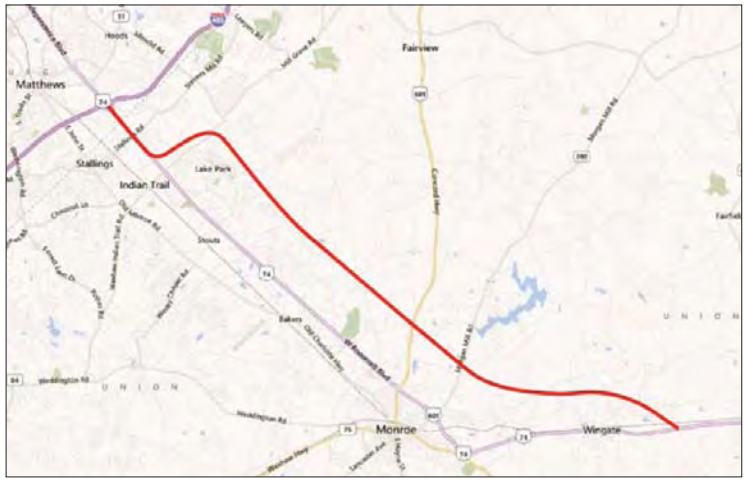

Figure 2 – Monroe Bypass/Connector Location Map

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for improvements to the WSA study to provide better data about who is on local roads, where drivers are going, and which routes drivers choose to take.

These two studies were performed as part of studies for the Monroe Bypass/Connector Project, a proposed four/six-lane, controlled-access facility with an approximately 300' right-of-way width. The proposed project is located to the north of, and roughly parallel to, existing US 74. The selected alternative of the Monroe Bypass/Connector will stretch from Stallings, NC, to just beyond Wingate, NC, and will start and end at interchanges with US 74. The location of the Monroe Bypass/Connector is shown as a bold red line in Figure 2. According the "Statement of Purpose and Need," prepared by PBS&J for the NCDOT and the NCTA in February 2008, the purpose of the proposed project is to "construct a facility that allows for safe, reliable, high-speed regional travel in the US 74 Corridor between I-485 in Mecklenburg County and the Town of Marshville in Union County, in a manner consistent with the North Carolina Strategic Highway Corridors Vision Plan for US 74 and the designation of US 74 on the North Carolina Intrastate System" and to "improve mobility in the US 74 corridor within the project study area, while maintaining access to properties along existing US 74." The Monroe Bypass/Connector is projected to have substantial economic, environmental and societal impacts on local areas.

OCL reviewed the Stantec and WSA studies related to US 74 to determine if modifications to existing US 74 could help meet some of the purposes specified for the Monroe Bypass/Connector and to determine if the information currently available to local decision makers is sufficient to make substantial transportation decisions. A full description of OCL's statement of assignment may be found in Appendix A of this report.

Approaches to Congestion Relief

Road congestion is a common problem faced by transportation planners and road designers. Congestion occurs for several reasons, but often occurs when more vehicles travel on a stretch of road than the road is designed to carry. Traffic congestion is commonly cited as a major source of frustration for road users.

Planners and local leaders have the task of providing congestion relief for local residents while maintaining budgets and minimizing adverse environmental and/or societal effects. As a result, new alternatives for cost-effective congestion relief with limited negative impacts are always being explored.

One common approach to providing congestion relief is to simply add additional driving lanes on congested routes, providing additional vehicle capacity. However, adding lanes and/or roads is often expensive and can create other impacts, including right-of-way acquisition opposition and environmental impacts. Planners often look at other solutions, such as managing existing infrastructure, to try and maximize the efficiency of these existing roads.

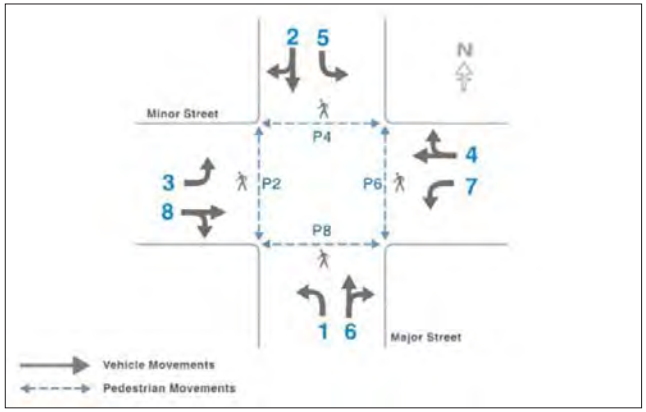


Figure 3 – Typical Vehicular and Pedestrian Movements at a Four-Leg Intersection

U.S. DOT FHWA, "Traffic Signal Timing Manual," Chapter 4–Traffic Signal Design, Section 4.2–Phasing Overview, 2009

As planners have eased away from adding pavement, new approaches to congestion relief have been implemented by planners. Signal timing optimization is one strategy to attempt to reduce overall congestion. Jurisdictions will modify the timing of traffic signals to create an ideal flow situation for vehicles. Several consecutive traffic signals will be modeled and timed together to encourage efficient traffic flow and minimize queuing delay. Planners will make adjustments to signal timing based on road-use data and will run software models to determine projected delay. Signal timing optimization needs to be consistently maintained and adjusted over the long term to maintain the benefits from the original optimization process.

Another common method of congestion relief is phase management for traffic signals. Traffic signals provide "phases," meaning times when certain movements are permitted. By reviewing intersection data and allocating differing amounts of time for different movements based on this data, planners can work to maximize intersection efficiency by minimizing queuing time for turning/through movements. See Figure 3 for a typical vehicular and pedestrian movement diagram. Like signal timing optimization, signal phase management needs to be periodically updated to remain effective. It also needs to be based on relevant traffic data, as the developed phase times are predicated on the demand for individual traffic movements.

Adding a left turn phase will not provide an overall benefit to the delay and level of service at a site if no vehicles need to turn left. Present or future models must be based on quality data.

A third means of congestion relief is to modify lane length or revise lane movements. By revising the amount of stacking space in certain lanes or providing additional turning/through lanes, planners can help reduce overall delay at certain intersections by keeping cars making turning movements out of dedicated through lanes, and keeping cars going straight through intersections out of turning lanes, through traffic still may be blocked by a turning vehicle in a through/turn lane. If these lanes are separated, through traffic can continue while turning vehicles wait for safe passage. Software models can project delay based on new intersection configurations, and this data can be compared to determine if the overall delay will be reduced. It is assumed that if this delay is reduced, and the LOS is improved, congestion relief will naturally occur.

Additional means of congestion relief are available to transportation planners, and new, alternative designs are consistently being studied to determine if the assumed effect on congestion can help balance proposed impacts and proposed cost. Newer designs, such as superstreet facilities, roundabouts, and high-occupancy toll facilities can also be considered as a means for overall congestion relief. When dealing with a congestion relief problem, planners should review multiple means and collect reliable data prior to making final decisions so a quality solution can be found for the congestion problem.

One means of congestion relief briefly discussed in the Stantec report is the concept of a superstreet design. Stantec defines a "superstreet-type facility" as "intersections that do not allow left turns from side streets, but require vehicles to turn right and then make a U-turn at an adjacent median opening."

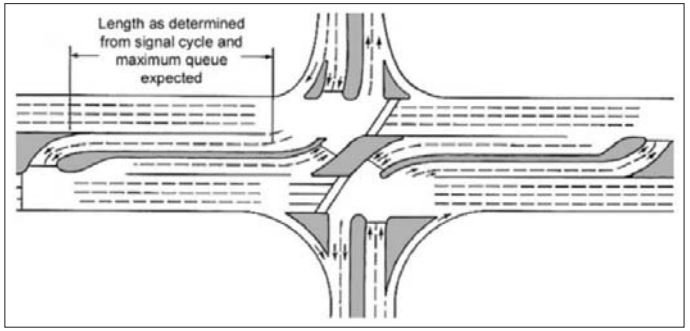


Figure 4 – Illustration of superstreet median crossover

U.S. DOT FHWA, "Signalized Intersections: Information Guide," Chapter 10 – Alternative Intersection Treatments, Section 10.2.5 - Super-Street Median Crossover, 2004

According to NCDOT's SHC page, a superstreet also prohibits through movements on side-streets, forcing all traffic to turn right and make the necessary U-turn at the next intersection. Superstreet design removes left-turning movements from the side streets; by doing this, transportation designers can remove a movement from intersections that either creates a protected phase (causing delay for all other drivers) or causes delay to left-turners who are unable to find a break in which to make a safe turn. See Figure 4 for an illustration of a superstreet median crossover. There are generally two main requirements for this to potentially reduce delay. The first requirement is adequate left turn lane length at adjacent intersections along the corridor to address both left turners from the main road and left turners from the side street. The second requirement is that intersections are close enough that delay experienced from going the "wrong way" on the main road will be less than the saved time from the potential left turning movement. Modeling is required of a length of corridor to determine if these time savings will be felt by the average driver.

Superstreet design is currently under study in North Carolina and in several other locations around the country; the states of North Carolina and Maryland have led this development as an adequate means of traffic and delay control. According to a 2011 study entitled "Operational Effects of Signalized Superstreets in North Carolina" by Dr. Joseph Hummer, a professor at North Carolina State University, studies at intersections with an implemented superstreet design have shown a "20 percent overall reduction in travel time compared to similar intersections that use conventional travel design." This study indicates that superstreet design should be further explored as a means of providing for turning movements in a safe and time-effective manner. Figure 5 shows a constructed superstreet in Michigan.

Figure 5 – Superstreet intersection of W. Big Beaver Rd. and Lakeview Dr., Troy, MI

Imagery ©2013 Digital Globe, GeoEye, U.S. Geological Survey, USDA Farm Service Agency, Map Data ©2013 Google

REVIEW OF REPORTS/ ADDITIONAL STUDY REQUIRED

OCL primarily reviewed and assessed two reports as part of this assignment and has provided comment on these reports herein.

Detailed Review of the Stantec Report

Summary

OCL performed a thorough review of Stantec's US 74 Corridor Study. Based on OCL's review of the Stantec report, OCL believes additional study is required to thoroughly "complete" the study. The current Stantec report provides information on the overall delay vehicles on US 74 experience. This delay is based on software models incorporating proposed short-term and long-term transportation recommendations into the existing US 74 corridor.

Overall, OCL believes the recommendations made by Stantec will have a positive impact on drivers on US 74. However, the recommendations made by Stantec are only projected to 2015. To provide a true long-term study, OCL recommends Stantec revise its study to project proposed time delay to travelers on US 74 several years beyond 2015. OCL also recommends Stantec incorporate two existing interchanges into its software model and re-evaluate its traffic projections to better provide a long-term delay model to local decision makers.

OCL's task in reviewing the Stantec report was to determine the overall feasibility of the proposed upgrades/recommendations and to assess the ability of the stated recommendations to provide short-term and long-term benefits to local residents. Additionally, OCL was tasked with commenting on whether these recommendations could be expanded to provide longer-term benefits to local residents. OCL did not provide an assessment of the study methodology used by Stantec; rather, OCL focused on the intersection improvement recommendations made by Stantec.

Stantec's Study Methodology

Stantec's report was commissioned by NCDOT and was completed in 2007. Stantec's stated goal of its study is as follows:

The ultimate goal of the study is to extend the long-term viability of US 74. Study goals were to identify and develop improvements that, where possible, would provide a LOS of D or better at each signalized intersection for projected 2015 traffic volumes. Because of development along the study corridor and agency budgetary constraints, LOS goals were not attainable at all locations. Where LOS goals could not be attained, reasonable improvements were recommended within the study constraints.

According to Stantec, multiple intersections along US 74 would operate at an unacceptable LOS (defined as either LOS "E" or "F") by 2015 if existing travel conditions are maintained. This point is supported by Stantec's models. The proposed upgrades would be necessary to keep many of the intersections along US 74 operating at an acceptable LOS.

Stantec provided recommendations for 23 intersections along US 74, using existing traffic volumes measured in 2007 as a baseline. Stantec modeled the average delay for each intersection in the study. This average existing conditions delay (2007 delay) was charted for individual intersections. Stantec then projected traffic volumes in 2015 using an annual growth rate of 3% and updated its existing conditions model with these revised traffic volumes, yielding a new average delay (no-build delay) for each intersection. This model assumed that no new modifications had been made to US 74.

Stantec then prepared a series of recommendations for improvements to the US 74 corridor. Stantec split these recommendations into short-term improvements and long-term improvements, defining short-term improvements as remedies that could be implemented within a timeframe of roughly one year and at a cost of less than $250,000, and long-term improvements as improvements requiring several years to implement and at a cost greater than $250,000. Stantec then inserted the proposed short-term and long-term improvements in its software and re-ran the model for each situation using the proposed 2015 traffic volume.

Stantec charted the proposed delay for each situation at individual intersections, yielding delay statistics for the proposed short-term recommendations (short-term delay) and the proposed long-term recommendations (long-term delay).

Short-Term Recommendations

In general, Stantec's short-term recommendations focus on optimizing traffic signal timing, modifying traffic signal phasing, increasing storage length of certain turn lanes, and modifying existing lane alignments for certain intersections. Stantec recommended continuous operations review and maintenance along the corridor to monitor and maintain this reduction in delay. Stantec also recommended eliminating split-side movements and allowing protected-permitted left turn movements where protected-only movements may be warranted. Stantec estimated the total cost of the proposed short-term improvements, excluding right-of-way acquisition and traffic control costs, at $3,100,000.

Per OCL's review, Stantec's short-term recommendations for these intersections are realistic and feasible to complete. Signal timing optimization is included as a short-term improvement for each intersection reviewed by the Stantec study.

Stantec recommends the conversion of an existing traffic signal to an eight-phase traffic signal in four locations. An eight-phase traffic signal provides green time for protected left turns to drivers on all intersection approaches. The Stantec Report does not provide information on the exiting signal timing for these intersections; however, OCL has assumed that Stantec is proposing to expand the total number of phases included at each signal.

A reduction in delay resulting from a signal phase change is documented at the intersection of US 74 and Stallings Road, where the proposed 2015 no-build scenario is projected to have an LOS of F in both the AM and PM Peak Hours, with delays of 138.60 seconds and 197.50 seconds, respectively. If an eight-phase signal modification (along with the signal timing optimization for the entire corridor) is implemented as a short-term improvement, the delay at this intersection is projected to be reduced to 58.10 seconds in the AM peak hour and 99.30 seconds in the PM peak hour. Though the LOS for 2015 short-term situation will still be "E" in the AM and "F" in the PM, the overall reduction in delay time is substantial. The total sum of the differences in delay between the 2015 no build model and the 2015 short-term model is 66.3 seconds for the AM peak hour and 356.4 seconds for the PM peak hour. This is shown in Figure 6.

Peak Hour	2007 Existing		2015 No-Build		Short Term	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
AM	D	43.13	F	138.60	E	58.10
PM	D	48.87	F	197.50	F	99.30

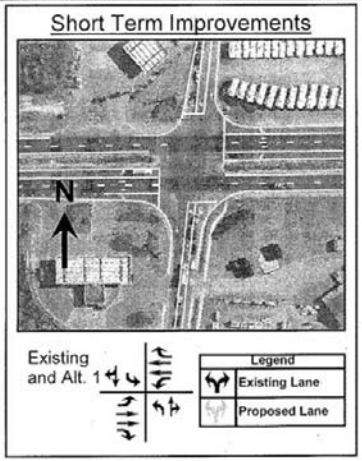


Figure 6 – Recommended Short-Term Improvements, US 74 and Stallings Road

Stantec, US 74 Corridor Study, Final Report, Section 6.3.1 US 74 at Stallings Road

In order to implement the new phasing timing, a current traffic study is required to determine the total length of the phases for individual traffic movements. New traffic signals may need to be installed if the existing signals do not have the appropriate left-turn signalization hardware. Maintenance and evaluation of the phase timing is also required to ensure the timing provided for each phase is in line with the traffic usage. However, this installation could be done in a short period of time and could quickly provide delay benefits to local residents.

Stantec makes several short-term recommendations for the addition of turning lanes or adding lane length for the expansion of existing turning lanes. The fol-

lowing table illustrates the proposed short-term lane addition/lengthening for certain intersections along the US 74 corridor:

Intersection	Proposed Short-Term Improvement(s)
Unionville-Indian Trail Road	Add eastbound left turn lane on US 74
Wesley Chapel-Stouts Road/ Sardis Church Road	Increase northbound Wesley Chapel-Stouts Road left turn lane storage to 250 ft.
Hanover Drive	Increase the westbound US 74 left turn lane storage to 200 ft.
Secrest Short Cut Road	Increase the southbound Secrest Short Cut Road left turn lane storage to 300 ft.
Morgan Mill Road	Increase the Morgan Mill Road left turn and right turn lane storage to 200 ft.
Walkup Avenue	Extend the Westbound US 74 left turn lane to 300 ft.; add an additional left turn Lane to the eastbound approach of US 74; extend the left turn and right turn lane storage on Walkup Avenue to 200 ft.

Additionally, Stantec also recommended modifying specific lane assignments in several locations. The following table illustrates the proposed short-term lane modifications for certain intersections along the US 74 corridor:

Intersection	Proposed Short-Term Improvement(s)
Indian Trail-Fairview Road	Modify the southbound approach of Indian Trail-Fairview Road from the existing right turn, left turn, and left turn/through lane configuration to a left turn lane (with 300 ft of storage), dedicated through lane, and right turn lane
Unionville-Indian Trail Road	Modify the northbound approach on Unionville-Indian Trail Road from the existing configuration (right turn lane, left turn/through lane) to a new configuration (right turn/through lane and left turn/ through lane)
Hanover Drive	Convert the existing right turn lane on the westbound US 74 approach to a right turn/through lane

Finally, Stantec proposes installing 17 left-overs and closing a single median crossover along US 74. A left-over is a proposed left turn lane protected by a concrete island; a traffic signal is not provided at a left-over. The purpose of a left-over is to provide space for stacking vehicles wishing to make a left turn so vehicles do not stop in the main through lanes while trying to turn left.

Overall, the recommendations for the addition of lanes/storage space or modification of movements in lanes should offer a degree of delay relief to local residents. Most recommendations made by Stantec provide additional storage in turning lanes or dedicated through lanes for drivers. Stantec's overall intent appears to be separate turning traffic from through traffic as often as possible.

The addition of turning lane storage will help alleviate problems resulting from turning vehicles stacking into through lane storage and delaying through traffic. Adding lane capacity and providing protected left turns will reduce delay for turning drivers, and moving these turning drivers out of through lanes will reduce delay for through drivers. New dedicated through lanes will provide additional highway capacity, allowing more vehicles to pass certain lights without being stopped and delayed.

In OCL's opinion, the principles behind this short-term recommendation methodology are sound and should help to reduce short-term delay. This opinion is supported by Stantec's delay statistics. The chart on the next page highlights the total delay across the study corridor for the no-build and short-term scenario:

Situation	AM Peak Delay	PM Peak Delay
2015 No-Build Situation	766.0 seconds	1,600.4 seconds
2015 Short Term	715.7 seconds	944.9 seconds

The proposed recommendations made by Stantec offer proposed delay benefits to local residents. Only the AM peak hour delay for the 2015 long term, when compared with the 2015 no-build situation (excluding Stallings Road, Indian Trail-Fairview Road, and Unionville-Indian Trail Road) indicated a minor increase in delay as a result of completion of Stantec's proposed recommendations. The AM peak hour delay reduction for the short-term improvements was 50.3 seconds. Thus, the short-term recommendations offered a small amount of delay relief to local residents.

Significant time savings are projected for the PM peak hour. Upon completion of the short-term recommendations, the average PM peak hour delay for vehicles reduces by 655.5 seconds, a total of nearly 11 minutes. Stantec's short-term recommendations offer real benefits to local residents over this time frame.

The short-term recommendations are relatively easy to evaluate; it is assumed that the recommendations, due to the ease/speed with which they could be installed, could provide benefits whenever NCDOT chooses to implement them.

Long-Term Recommendations

Stantec's long-term recommendations include the conversion of a certain section of US 74 to a superstreet facility, the addition of lanes to several intersections, and the addition of lane storage length in multiple locations. Stantec also recommends the optimization of signal timing and modification of signal phases as individual long-term recommendations. Several of the recommendations mirror the proposed short-term recommendations; however, the overall cost and time of implementation make these recommendations a more time-consuming process that may require additional study. Stantec estimated the total cost of the proposed long-term improvements at $10,200,000.

Stantec recommends signal timing optimization as a long-term recommendation at 15 of the 23 studied intersections, even after proposing signal timing optimization at all 23 intersections for short-term recommendations. In OCL's opinion, signal optimization would likely provide long-term delay benefits to the overall corridor; the long-term benefits are also more pronounced than the short-term recommendations. At certain intersections, this improvement would be significant. The intersection of Pageland Highway and US 74 is shown in Figure 7. At Pageland Highway, the 2015 long-term LOS, through just the implementation of signal timing optimization, is projected to improve from "E" to "C," with a delay savings of over 44 seconds at the PM peak travel hour. However, the intersection directly to the east of the Pageland Highway intersection, Franklin Street, shows an increase in delay between the 2015 no-build and 2015 long-term delay of over 12 seconds. The 2015 no-build LOS is a "C," while the 2015 LOS with the proposed long-term improvement is "D." Delay at certain intersections is increased by signal timing optimization, while other intersections experience reductions in delay from the optimization process.

Figure 7 – Intersection of US 74 and Pageland Highway
U.S. Department of the Interior U.S. Geological Survey, 2007

However, the overall benefit to the corridor by the optimization is real and is a feasible solution that can offer delay relief to local residents. For the ten intersections where Stantec solely proposed optimization of signal timing as a long-term improvement, the projected PM peak delay for the long-term improvement is reduced by a total of 57.58 seconds from the 2015 no-build option. Of these ten intersections, five will experience an improvement in LOS as a result of this optimization. Two of the ten intersections will have an LOS that is worsened. Though certain intersections may experience an increase in delay, OCL believes signal timing optimization will benefit the US 74 corridor, provided it is maintained properly.

Stantec also makes a long-term recommendation to convert existing traffic signals to an eight-phase traffic signal. This recommendation is made at five intersections along US 74. OCL anticipates this recommendation to have a positive effect on local drivers for the same reasons as described in the short-term section. This is backed up by Stantec's provided data. The total sum of the reductions in delay between the 2015 no build model and the 2015 long-term model for these five intersections is 34.4 seconds for the AM peak hour and 367.87 seconds for the PM peak hour.

In addition to the previously-described short-term recommendations, Stantec makes several long-term recommendations for the addition of turning lanes/lane length. The following table illustrates the proposed long-term lane addition/lengthening for certain intersections along the US 74 corridor:

Intersection	Proposed Long-Term Improvement(s)
Wesley Chapel-Stouts Road/Sardis Church Road	Add a right turn lane with 250 ft. of storage on the southbound Sardis Church Road approach; add a second left turn lane on the northbound Wesley Chapel-Stouts Road approach; add a right turn lane along eastbound US 74
Chamber Drive	Add a right turn lane with 175 ft. of storage on Chamber Drive
Rocky River Road	Add a through/right turn lane on the northbound and southbound approach on Rocky River Road with 250 ft. of storage in the left turn lane on the northbound approach and 275 ft. of storage in the left turn lane on the southbound approach
Roland Drive/Round Table Road	Add a through lane along eastbound and westbound US 74
Williams Road	Add a through lane along eastbound and westbound US 74
Hanover Drive	Add a through lane along eastbound and westbound US 74; increase the westbound US 74 left turn lane storage to 200 ft.
Secrest Short Cut Road	Increase the southbound Secrest Short Cut Road left turn lane storage to 300 ft.
Morgan Mill Road	Increase the Morgan Mill Road left turn and right turn lane storage to 200 ft.
Walkup Avenue	Extend the westbound US 74 left turn lane to 300 ft; add an additional left turn lane to the eastbound approach of US 74; extend the left turn and right turn lane storage on Walkup Avenue to 200 ft.

Additionally, Stantec also recommended modifying specific lane assignments in several locations. The following table illustrates the proposed long-term lane modifications for certain intersections along the US 74 corridor:

Intersection	Proposed Improvement(s)
Wesley Chapel-Stouts Road/ Sardis Church Road	Convert the existing through/right turn lane on the southbound approach of Sardis Church Road to a Dedicated Through Lane (Proposed in Conjunction with the Addition of a New Right Turn Lane)
Chamber Drive	Convert the existing right turn/left turn lane on the southbound approach of Chamber Drive to a dedicated left turn lane (proposed in conjunction with the addition of a new right turn lane)
Hanover Drive	Convert the existing right turn lane on the westbound US 74 approach to a right turn/through lane (listed both in ST and LT improvements)

These recommendations are quite similar to those made in the short term, and the expected benefits are similar. The addition of this turning lane storage in the long term will continue to alleviate problems resulting from turning vehicles stacking into through lane storage and delaying through traffic. Adding lane capacity and providing protected left turns in the long term will continue to reduce delay for turning drivers, and moving these turning drivers out of through lanes will continue to reduce delay for through drivers. Essentially, the same benefits will be provided to local drivers. These implementations will simply take longer and are more expensive than the short-term recommendations.

Once again, Stantec's data backs up these assertions. The following chart highlights the total delay across the study corridor for the no-build and long-term scenarios. The No-Build total for this chart excludes three intersections (US 74 with Stallings Road, Indian Trail-Fairview Road, and Unionville-Indian Trail Road) as long-term delays were not provided in the Stantec report for these intersections.

Situation	AM Peak Delay	PM Peak Delay
2015 No Build (Excluding Stallings Road, Indian Trail-Fairview Road, and Unionville-Indian Trail Road	538.0 seconds	1,147.6 seconds
2015 Long Term	538.9 seconds	658.5 seconds

As can be seen from this chart, the construction of the long-term recommendations will provide a PM peak delay reduction of approximately 489.11 seconds for drivers traveling the length of the corridor. The AM peak delay will remain roughly the same. Stantec's long-term recommendations offer delay benefits to local residents over this time frame; residents traveling on US 74 will save substantial time driving US 74 in the PM hours if Stantec's long-term recommendations are implemented.

Stantec also discusses the possibility of converting a portion of US 74 into a "superstreet" as a long-term recommendation. This modification is recommended for the intersections of US 74 with Stallings Road, Indian Trail-Fairview Road, and Unionville-Indian Trail Road. As previously stated, Stantec defines a "superstreet-type facility" as "intersections that do not allow left turns from side streets, but require vehicles to turn right and then make a U-turn at an adjacent median opening." The purpose of this design is to remove left-turning movements from side streets, eliminating an operation that often creates delay for through traffic and right turns on side streets. The concept is reliant on local left turn lanes along the main road having enough stacking space to accommodate travelers wishing to make left and U-turn movements.

No long-term delay figures for these three intersections are provided in the portion of the report reviewed by OCL; according to the Stantec report, LOS, delay, and travel time results from superstreet design implementation is found in Appendix VIII of the

report, which was not readily available to OCL personnel. OCL believes this is a design solution worth studying as a means of further reducing delay.

Evaluation of Recommendations

Stantec's recommendations, as made to NCDOT, should benefit local residents by saving driving time along the US 74 corridor. However, Stantec's long-term projections extend only to 2015, eight years later than the existing conditions, and only two years away from the publication of this report. The Monroe Bypass/Connector is proposed as a long-term solution to transportation concerns southeast of Charlotte. In order to accurately determine if US 74 and the proposed recommendations would help solve local, long-term transportation problems, the recommendations for upgrading US 74 should be evaluated over for a longer timeframe. While it is clear that the proposed solutions do offer substantial benefits to residents, it remains unclear if these benefits project over an additional 20 years in the future.

In OCL's opinion, Stantec has provided valid recommendations that could be used to provide delay relief to local residents using US-74 at lesser cost than the proposed Monroe Bypass/Connector project (projected to cost between $749.1 and $824.3 million according to the NCDOT "Monroe Bypass/Connector Final EIS Fact Sheet"). OCL believes it is reasonable to assume that some benefits would extend over a longer term that matches the Monroe Bypass/Connector timeline; therefore, Stantec's report should be projected further in the future to determine if these recommendations could provide necessary long-term relief to residents in a cost-effective manner. These data could help determine if improvements to US 74 are a viable long-term solution that could help meet the goal of high-speed, safe transportation in the US 74 area while still providing local access to properties along US 74.

Interchange Evaluation

The subject stretch of US 74 reviewed by Stantec includes two larger interchanges that are not discussed in the Stantec report. The larger of the two interchanges is located at the crossing of Skyway Drive (State Highway 75) and US 74 in Monroe, NC, and is shown in Figure 8. State Highway 75 passes over US 74, and several exit ramps allow for movement between the two roads. Concord Avenue, northwest of State Highway 75, also crosses over of US 74 and is shown in Figure 9, on the next page. Access is provided between the two roads through two sign-controlled intersections along Concord Avenue. Access is provided to both traveling directions of US 74 via exit ramps. Traffic is allowed to accelerate/decelerate and merge into US 74 from Concord Avenue in dedicated lanes.

Figure 8 – Intersection of Skyway Dr. and US 74, Monroe, NC
U.S. Department of the Interior U.S. Geological Survey, 2007

OCL did not perform any engineering analysis on these interchanges. However, based on a visual evaluation, OCL believes delay may occur on US 74 at the Concord Avenue interchange. Inadequate acceleration/deceleration lane length space may cause drivers from Concord Avenue to enter US 74 at speeds below

Figure 9 – Intersection of Concorde Ave. and US 74, Monroe, NC
U.S. Department of the Interior, U.S. Geological Survey, 2007

the posted speed limit, forcing drivers in the far right lane of US 74 to brake for below-speed drivers or slow down to allow for merging activity. Additionally, the access ramps from US 74 appear short. Drivers turning onto Concord Avenue may stack onto US 74, creating additional delay on US 74. One potential solution to this inadequate lane length is to extend the length of the acceleration/deceleration lanes, allowing drivers to perform full acceleration/deceleration prior to entering/exiting US 74; this should be investigated as either a long-term recommendation. Additional solutions, such as increasing the lengths of the on/off ramps or modifying the interchange configuration, should also be investigated. This interchange should be included in the expanded Stantec study to determine if total overall total delay will be impacted by the current intersection configuration.

Based on a visual review of the interchange between US 74 and State Highway 75, it appears there is an adequate amount of car storage space and acceleration/deceleration lane length; OCL does not believe this interchange, as currently configured, will create undue delay on US 74. However, for the purposes of thoroughness, this interchange should also be included in the revised Stantec report to accurately model overall corridor delay. Notable amounts of congestion resulting from movements at this intersection should be included in this review and in local transportation evaluation.

Clearly, there is some additional information needed to fully evaluate the potential for Stantec's recommendations to alleviate traffic problems found on US 74. An expanded study should be performed on these interchanges to adequately determine whether recommendations are needed at these interchanges to improvement overall movement on US 74.

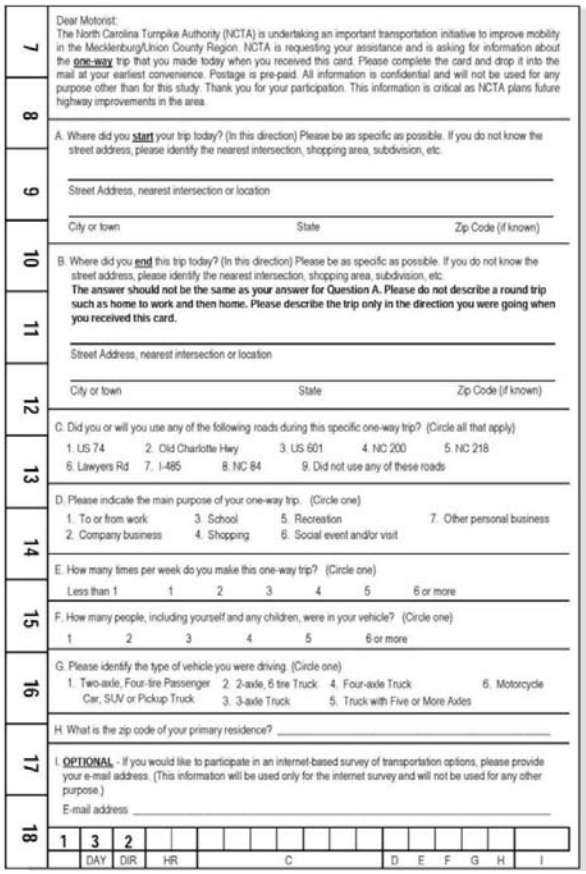
Detailed Review of the Wilbur Smith Associates Report

OCL reviewed the WSA report entitled "Final Report – Proposed Monroe Bypass/Connector Comprehensive Traffic and Revenue Study," prepared for the NCTA by WSA. This report is dated October 22, 2012. In reviewing this report, OCL concluded that the WSA report did not thoroughly answer certain questions and needs to have additional detail added to provide the best possible information to local decision makers. In particular, the information gathered for the O-D Study needs to be expanded and gathered in revised manner to provide useful data on local and regional transportation patterns.

From 2009-10, WSA completed several studies in relation to the Monroe Bypass/Connector project. WSA completed an O-D Study in the area of the proposed Monroe Bypass/Connector using a mail-back survey procedure. A sample survey card is depicted in Figure 10. The O-D Study was performed to catalogue travel patterns and trip characteristics of local residents. This data was later used by WSA to develop a local value of time.

OCL reviewed this report to comment on the relevance and thoroughness of the O-D Study and the need for additional traffic/transportation study. OCL was also asked to comment on the importance of a full O-D Study and limitations of current studies without complete O-D information.

In the report, WSA indicated that the O-D Study was performed based on 3,611 valid surveys returned to WSA from 23,807 distributed surveys. These surveys were distributed to drivers at ten locations in the area



Dear Motorist:
The North Carolina Turnpike Authority (NCTA) is undertaking an important transportation initiative to improve mobility in the Mecklenburg/Union County Region. NCTA is requesting your assistance and is asking for information about the **one-way** trip that you made today when you received this card. Please complete the card and drop it into the mail at your earliest convenience. Postage is pre-paid. All information is confidential and will not be used for any purpose other than for this study. Thank you for your participation. This information is critical as NCTA plans future highway improvements in the area.

A. Where did you **start** your trip today? (In this direction) Please be as specific as possible. If you do not know the street address, please identify the nearest intersection, shopping area, subdivision, etc.

Street Address, nearest intersection or location

City or town State Zip Code (if known)

B. Where did you **end** this trip today? (In this direction) Please be as specific as possible. If you do not know the street address, please identify the nearest intersection, shopping area, subdivision, etc.
The answer should not be the same as your answer for Question A. Please do not describe a round trip such as home to work and then home. Please describe the trip only in the direction you were going when you received this card.

Street Address, nearest intersection or location

City or town State Zip Code (if known)

C. Did you or will you use any of the following roads during this specific one-way trip? (Circle all that apply)
1. US 74 2. Old Charlotte Hwy 3. US 601 4. NC 200 5. NC 218
6. Lawyers Rd 7. I-485 8. NC 84 9. Did not use any of these roads

D. Please indicate the main purpose of your one-way trip. (Circle one)
1. To or from work 3. School 5. Recreation 7. Other personal business
2. Company business 4. Shopping 6. Social event and/or visit

E. How many times per week do you make this one-way trip? (Circle one)
Less than 1 1 2 3 4 5 6 or more

F. How many people, including yourself and any children, were in your vehicle? (Circle one)
1 2 3 4 5 6 or more

G. Please identify the type of vehicle you were driving. (Circle one)
1. Two-axle, Four-tire Passenger Car, SUV or Pickup Truck 2. 2-axle, 6 tire Truck 3. 3-axle Truck 4. Four-axle Truck 5. Truck with Five or More Axles 6. Motorcycle

H. What is the zip code of your primary residence?

I. **OPTIONAL** - If you would like to participate in an internet-based survey of transportation options, please provide your e-mail address. (This information will be used only for the internet survey and will not be used for any other purpose.)
E-mail address

1	3	2															
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Figure 10 – Sample Survey Card

North Carolina Turnpike Authority Final Report, "Proposed Monroe Connector/Bypass Comprehensive Traffic and Revenue Study," Wilbur Smith Associates, Chapter 3 - Travel Pattern Survey, Figure 3-2 - Sample Survey Card, October 22, 2010

of US 74 in Union County and included queries on starting and ending location of trips, frequency of the trips, types of vehicle making the trip, and the home zip code of the driver. Using this data, WSA created charts showing the trip purpose, frequency, occupancy, and vehicle class based on peak and off-peak hours. WSA also developed overall charts showing origin-destination pairs gleaned from the survey.

In reviewing WSA's O-D Study, OCL noted the locations of the survey drop-off points. All points were located outside of the existing I-485 Charlotte Outerloop. However, no surveys were provided to travelers in Charlotte, Matthews, or other towns within the Charlotte Outerloop. The survey locations are shown in Figure 11 on the next page. OCL recommends providing surveys to drivers at a location nearer to Charlotte. The need for this is indicated by the disparity between the number of trips originating and ending in Charlotte, which is the dominant employment and population center in the region. Only 5.6% of both peak hour and non-peak hour trips used in the O-D Study originated in Charlotte; however, 26.8% of the trips in the study ended in Charlotte. This substantial disparity indicates that the location of the handout locations should have been adjusted to provide a better cross-section of drivers. OCL understands that O-D survey methodologies are not an exact science. However, an accurate representation of the local culture and travel patterns needs to be obtained, and the best way to obtain this accurate information is to survey an accurate cross-section of the local populace.

In OCL's opinion, it is important for the O-D survey to provide an accurate breakdown of the numbers of trucks and passenger vehicles traveling along this stretch of US 74. OCL also considered the types of vehicles selected for this survey. WSA indicated that 98.4% of all peak period trips were made by drivers in two-axle passenger vehicles. 96.1% of the off-peak hour trips were made by drivers in two-axle passenger vehicles. According to Table 2-8 of the WSA report (Figure 12 on the next page), passenger vehicles constitute an average of 91.6% of vehicles in the area.

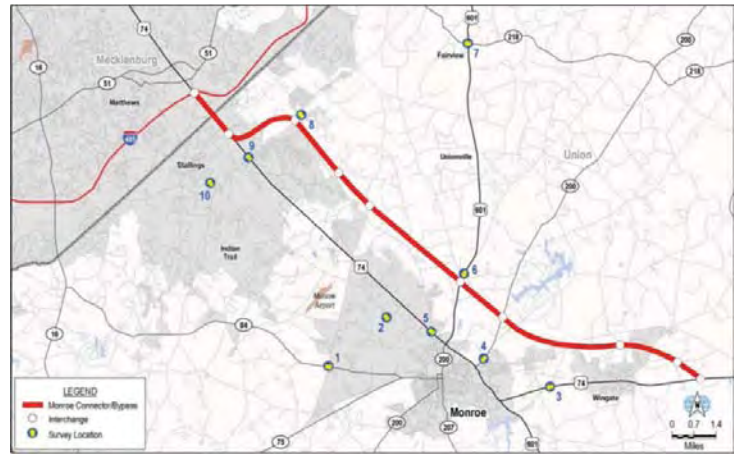

Figure 11 – Travel Pattern Survey Locations

North Carolina Turnpike Authority Final Report, "Proposed Monroe Connector/Bypass Comprehensive Traffic and Revenue Study, " Wilbur Smith Associates, Chapter 3 - Travel Pattern Survey, Figure 3-1 – Travel Pattern Survey Locations, October 22, 2010

For the purposes of this report, OCL assumed that "single unit" trucks, as listed in Table 2-8, corresponds with 2-axle, 6-wheel trucks (or trucks with more axles) from the O-D Study. Therefore, the O-D Study vehicle sample shows a difference of several percentage points from the measured vehicle percentages. OCL believes WSA should either collect additional data sets or adjust its data to more accurately model the true vehicle representation patterns in the area; this adjustment would provide a better representation of commercial traffic and thus, better information to evaluate local travel patterns. A better option would be to perform an O-D study on solely

Table 2-8
Vehicle Classifications at Selected Locations

Location	Passenger Vehicles & Light Trucks	Single-Unit Trucks	Multi-Unit Trucks	Total Trucks
NC 84 (Weddington Road) west of Rocky River Road	94.0%	4.0%	2.0%	6.0%
Old Charlotte Highway west of Dickerson Boulevard	93.0%	5.0%	2.0%	7.0%
US 74 east of Old Pageland Monroe Road / Secrest Avenue	89.4%	4.3%	6.3%	10.6%
NC 200 (Morgan Mill Road) north of Sutherland Avenue	95.0%	4.0%	1.0%	5.0%
US 74 west of Secrest Short Cut Road	92.2%	3.4%	4.4%	7.8%
US 601 (Concord Highway) north of Ridge Road / Baucom Deese Road	89.0%	6.0%	5.0%	11.0%
NC 218 (Fairview Road) east of US 601 (Concord Highway)	89.2%	6.1%	4.7%	10.8%
Secrest Short Cut Road south of Indian Trail Fairview Road	95.0%	4.0%	1.0%	5.0%
US 74 east of Indian Trail Road	89.8%	4.5%	5.7%	10.2%
Old Monroe Road east of Indian Trail Road	94.8%	4.0%	1.2%	5.2%
Average	**91.6%**	**4.3%**	**4.1%**	**8.4%**

Source: 7-Day Supplemental Counts in March 2009

Figure 12 – Table 2.8 Vehicle Classifications at Selected Locations

North Carolina Turnpike Authority Final Report, "Proposed Monroe Connector/Bypass Comprehensive Traffic and Revenue Study," Wilbur Smith Associates, Chapter 2 – Existing Travel Conditions, Table 2-8 Vehicle Classifications at Selected Locations, October 22, 2010

commercial vehicles to truly measure travel patterns of commercial drivers.

The O-D Study performed by WSA indicated that surveys were distributed at individual locations on either one or two specific days for each of the ten survey locations. General O-D study principles indicate that data should be captured every day of the week for a substantial period of time. This longer collection period accounts for travel variations with changes in days, months, and seasons. Though WSA later tries to normalize this data based on trends associated with travel across the months of the year, OCL believes projections should be made based on accurately-assembled data that takes these variations of travel into account.

OCL recognizes that O-D data can be difficult to collect due to limited funds and public participation. However, it appears that WSA could have expanded its study to include additional information that would have yielded more accurate results. It is troubling that WSA collected data for only one day at individual locations; it indicates to OCL that the study was conducted very quickly. The speed of this study may have been done at the expense of completeness.

Overall, OCL recommends WSA revise its O-D Study in the following three ways:

- Perform individual commercial traffic and passenger vehicle traffic O-D studies
- Expand the data collection area to include sites inside the Charlotte Outerloop, including locations in Matthews, Charlotte, and other population centers
- Expand the amount of time spent collecting data to account for variations in travel patterns by collecting data at each location for at least one month

OCL believes a study with additional survey location points and additional study length must be performed to accurately model the trip patterns of the local population. Collecting a larger sample size of data over a longer period of time will help normalize outlying trends and provide an accurate data set.

A complete and accurate O-D study is very important to transportation designers and planners to accurately approximate the travel patterns of local residents. These residents will be done a disservice if a proper O-D study with proper methodology is not performed. The remainder of the study performed by WSA is flawed without quality O-D information.

Additional Studies Required

In order to fully assess the proposed improvements associated with US 74 and the ability of these improvements to turn US 74 into a long-term transportation solution, OCL believes substantial additional research should be performed. Additional study must be conducted to determine if the recommendations proposed by the Stantec report sufficiently meet the long-term travel demands of the local population. OCL recommends the Stantec report be updated to determine if the stated recommendations will reduce delay for an extended period of time. OCL agrees that the provided recommendations likely will improve the corridor in an 8-10 year length of time, but the only way to be certain of the level of improvement over a length of time similar to that proposed for the Monroe Bypass/Connector is to complete a new study with appropriate input data. This is a necessary step in order to evaluate the US 74 recommendations against other potential transportation solutions.

An all-encompassing transportation study for the local area that accurately models future vehicle movement on US 74 would provide invaluable information to NCDOT, NCTA and other local stakeholders, allowing them to make informed decisions about future transportation projects. The current information that is available regarding US 74 is not substantial enough for these decisions to be made. OCL believes the updates proposed to the Stantec report and the WSA report are essential if these documents are to be used in a true evaluation of the potential for US 74 to provide a safe, reliable, and high-speed regional travel route in the existing US 74 corridor that still maintains access to existing properties along US 74.

A complete and accurate O-D study is essential to determine who is driving on US 74, the purposes of their trips, and the starting/ending destinations for their trips. Accurate projections using this data must be made based on Stantec's proposed recommendations to US 74 to determine if Stantec's recommendations will help to alleviate delay on US 74. This information must be considered to determine if US 74 can be improved to provide a long-term solution to local transportation concerns and provide effective transportation in this corridor at an effective price.

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CONCLUSION

Based on OCL's review, a thorough O-D study with high-quality data has not been performed for the area of North Carolina the Monroe Bypass is expected to service. The overall lack of a quality O-D study limits the conclusions that can be drawn from the studies reviewed by OCL.

It is essential for all stakeholders to know and understand the quality of data used to develop conclusions about future transportation projects and the wisest way to spend limited transportation dollars. OCL believes Stantec has provided NCDOT with good ideas about how to reduce delay along the US 74 corridor; these ideas simply need to be expanded over a longer time frame. Additionally, OCL recommends a more comprehensive O-D Study be performed and plugged into the methodologies proposed in the WSA study to accurately model the local population and provide decision makers with better data for moving forward.

Overall, OCL believes the reviewed reports could be improved and could provide better data to those making transportation decisions for the residents of North Carolina. The impacts of modifications to US 74 should be accurately quantified in a long-term fashion so the best decisions about future transportation planning can be made by local authorities. The best information that can be obtained should be made available to those wishing to benefit the drivers of North Carolina.

Moving forward, new studies should be conducted by the NCDOT to accurately assess the potential use of US 74 as a means of travel in the future. An O-D study that adequately models the local travel patterns should be used in conjunction with a software model and the recommendations proposed in the Stantec report to extend Stantec's shortened time frame over a longer period to accurately determine US 74's ability to function as a long-term congestion solution in the area of Charlotte, NC. This should be performed, and this information should be provided to local decision makers and the local populace prior to any further decisions being made on future transportation projects.

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER KENNETH JUDE O'CONNELL

7/3/13

This report was prepared under my direct supervision.

Kenneth J. O'Connell, Ph.D.
State of North Carolina Professional Engineer #22824

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APPENDIX: STATEMENT OF ASSIGNMENT

O'Connell & Lawrence, Inc. (OCL) is a consulting firm which provides construction consulting, construction management, engineering, and surveying services. OCL's staff is comprised of engineers, project managers, construction inspectors, surveyors, information system specialists, as well as support personnel. OCL is located in the Baltimore/Washington, D.C., suburb of Olney, Maryland, and has worked on projects throughout the United States. OCL has extensive experience in heavy civil, highway, transportation, industrial and commercial construction. OCL routinely reviews project documents and completes third-party reviews of proposed projects and/or design documents. OCL routinely performs engineering/surveying projects and prepares construction documents. As part of the preparation of these documents, OCL routinely reviews multiple options for individual design problems and effectively determines the most advantageous solution based on individual site characteristics.

OCL was retained by the Southern Environmental Law Center (SELC) to perform an independent and thorough evaluation of the proposed Monroe Bypass/Connector project, to be located southeast of Charlotte, NC, in both Union and Mecklenberg Counties. In particular, OCL was retained by SELC to review several documents prepared for NCDOT and NCTA regarding the proposed project. OCL reviewed the "US 74 Corridor Study," prepared by Stantec for the NCDOT and received from SELC on August 30, 2012. OCL reviewed a report entitled "Indirect and Cumulative Impact Analysis – R-2559 & R-3329 Monroe Bypass/Connector," prepared by HNTB North Carolina P.C. (HNTB). OCL also reviewed the "Final Report – Proposed Monroe Bypass/Connector Comprehensive Traffic and Revenue Study" prepared for the NCTA by WSA and dated October 22, 2012. OCL reviewed the "Monroe Bypass/Connector Administrative Action Record of Decision," dated August 2010 and prepared by the NCTA. Finally, OCL reviewed other publicly available documentation associated with the Monroe Bypass/Connector project to obtain a full picture of the proposed highway. This list is not all-inclusive. OCL personnel visited the subject area on August 29, 2012. Kenneth O'Connell, Ph.D., P.E., and Douglas Tilley, P.E., traveled to the Charlotte, NC, area with personnel from SELC and personally examined existing US 74 from the intersection with I-485 to Marshville, NC, beyond the proposed Monroe Bypass/Connector tie-in point with existing US 74.

OCL reviewed the US 74 Corridor Study, prepared by Stantec, and provided commentary on the effectiveness and feasibility of the proposed upgrades/recommendations. Stantec's report focused on providing spot improvements to local roads, most particularly US 74 and its cross-streets, in the area of the proposed Monroe Bypass/Connector. The Stantec Report covers proposed improvements along US 74 from Stallings Road to Highway 601; this stretch of highway travels from just southeast of the intersection of I-485 and US 74 to the center of Monroe, NC. It should be noted that this stretch of road does not fully parallel the proposed Monroe Bypass/Connector; this section of US 74 studied by Stantec parallels roughly half of the proposed Monroe Bypass/Connector, which is proposed to re-intersect with US 74 in the area of Wingate, NC.

The Stantec report is based on a traffic study performed between January and March 2007. Stantec personnel obtained traffic data, determined the AM and PM peak hour periods, and utilized CORSIM, Version 5, a traffic simulation program, to determine total time delay and LOS for each of the studied 23 intersections. Using this information, Stantec developed short-term and long-term improvements for individual intersections to reduce vehicular delay along existing US 74. The Stantec report makes recommendations to improve intersections along this stretch of road so as many of the 23 intersections as possible will function at a LOS of D or better. In this report, OCL comments on the ability of the recommendations made in Stantec's report to provide both short- and long-term benefits to local residents living in the vicinity of the US 74 project whether these recommendations could be expanded to a longer time frame. Stantec did not propose improvements to the interchanges of US 74 and State Highway 75 and Concord Avenue. OCL will comment on these unchanged interchanges, providing an assessment of the decision to leave these intersections untouched and suggesting potential recommendations for future interchange improvements that may assist local residents in the long term.

OCL also performed a thorough review of the WSA report, which detailed an O-D Study performed in March and April 2009. This O-D Study was used to determine local travel patterns in the area of the proposed Monroe Bypass/Connector. OCL reviewed this report for completeness, thoroughness, and relevance. In addition, OCL reviewed whether additional traffic generation/travel information is required to make an educated decision regarding the need for the Monroe Bypass/Connector project and provided comment on the importance of a full and complete set of Origin-Destination data prior to making costly road construction decisions.

Finally, OCL has provided comment on the need for additional studies and/or data collection prior to making final decisions on the need for the Monroe Bypass/Connector project. OCL believes additional information is required to make an educated decision on the need for the Monroe Bypass/Connector; the reasoning behind this belief may be found in this document.

The principal for this assignment is Kenneth J. O'Connell, Ph.D, P.E. Dr. O'Connell is registered Professional Engineer #22824 in the state of North Carolina.

Southern
Environmental
Law Center

Chapel Hill Office
601 West Rosemary Street,
Suite 220
Chapel Hill, NC 27516
Phone 919-967-1450
SouthernEnvironment.org

Table A-1: Southern Environmental Law Center

Document: i001 Report dated July 3, 2013

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	Alternatives Analysis	SELC commissioned a report entitled "A Closer Look at US 74: Challenges and Opportunities" to assist in SELC's review of the Monroe Connector/Bypass project.	NCDOT's responses to the report are presented in the attached memorandum dated November 5, 2013.

HNTB, North Carolina, PC
343 East Six Forks Rd Suite 200
Raleigh, North Carolina 27609

Final Memorandum

To: Jennifer Harris, PE

From: Spencer Franklin, PE, PTOE

Subject: Consideration of the report titled, *A Closer Look at US 74: Challenges and Opportunities*, in the project development process for the Monroe Connector/Bypass

Date: November 5, 2013

Project #: R-3329, R-2559

Purpose of this Memorandum

The purpose of the memorandum is to consider the comments and recommendations included in the OCL report and to determine if these comments and recommendations require additional studies or analyses of the Monroe Connector/Bypass project.

As part of this consideration process, Stantec Consulting Services, Inc. and CDM Smith reviewed OCL's comments specific to their technical reports and analyses. Their responses are included in **Attachment A** (Stantec Consulting Services, Inc.) and **Attachment B** (CDM Smith).

Background

The report *A Closer Look at US 74: Challenges and Opportunities* was prepared by O'Connell and Lawrence, Inc. (OCL) at the request of the Southern Environmental Law Center (SELC).

On July 24, 2013, SELC issued a press release on their website announcing the availability of the report (www.southernenvironment.org/uploads/fck/Monroe_Bypass_Report_0613_F.pdf). The North Carolina Department of Transportation (NCDOT) downloaded a copy of the report from the SELC Web site.

"OCL was retained by the Southern Environmental Law Center (SELC) to perform an independent and thorough evaluation of the proposed Monroe Bypass/Connector project, to be located southeast of Charlotte, NC, in both Union and Mecklenburg Counties." (OCL Report, page 21).

Focus of the OCL Report

As stated on page 7 of the OCL report, "OCL primarily reviewed and assessed two reports as part of this assignment and has provided comment on these reports herein." The two reports are:

- *US 74 Corridor Study, Union County, NC*. July 2007. Prepared by Stantec Consulting Services, Inc. (Referred to in this memorandum as the *2007 US 74 Corridor Study*)
- *Final Report – Proposed Monroe Connector/Bypass Comprehensive Traffic and Revenue Study*. October 22, 2010 (not 2012 as cited in the OCL report). Prepared by Wilbur Smith and Associates (now CDM Smith). (Referred to in this memorandum as the *2010 Final Traffic and Revenue Study*).

Discussion

The *2007 US 74 Corridor Study* and the *2010 Final Traffic and Revenue Study* were prepared independently and for different purposes. Both studies present results specific to their intended purposes and were not prepared, nor required, as part of the Monroe Bypass NEPA process. However in response to comments during the NEPA process, the Monroe Connector/Bypass EIS process did review and consider both of the referenced reports, as cited in the Draft EIS, Final EIS, and/or Draft Supplemental Final EIS.

2007 US 74 Corridor Study: The OCL report offers the following comments and recommendations related to the *2007 US 74 Corridor Study*. Many of the same comments and recommendations are repeated throughout the report. Therefore, these are summarized below, and the pages they appear on are noted.

- Stantec's study should be expanded to determine if delayed benefits will sustain over a longer timeframe and if improvements to US 74 could assist in addressing the stated purposes of the Monroe Connector/Bypass. This data could help determine if improvements to US 74 are a viable long-term solution that could help meet the goal of high-speed, safe transportation in the US 74 area while still providing local access to properties along US 74. (Executive Summary, page 7, page 13, page 17, page 19)
- Stantec also discusses the possibility of converting a portion of US 74 into a "superstreet" as a long-term recommendation…..OCL believes this is a design solution worth studying as a means of further reducing delay. (pages 12-13)
- An expanded study should be performed on the interchanges of US 74 at Concord Avenue and US 74 at State Highway 75 to adequately determine whether recommendations are needed at these interchanges to improve overall movement on US 74. (page 7 and page 14)
- This [OCL's recommendations] should be performed, and this information should be provided to local decision makers and the local populace prior to any further decisions being made on future transportation projects. (Executive Summary, page 19)

As noted by Stantec in **Attachment A**, the scope of the 2007 US 74 Corridor Study was to evaluate interim operational improvements for a specific segment of US 74. The US 74 Corridor Study assumes ultimate completion of the Monroe Connector/Bypass subsequent to the near-term (2015) horizon period of the study. The US 74 Corridor study was not intended to evaluate the Monroe Connector/Bypass or any alternative to the connector/bypass. The goal of the study was to make practicable, localized intersection recommendations to improve level of service along US 74, until the Monroe Connector/Bypass could be built, based on 2015 traffic.

The alternatives evaluation process employed for the Monroe Connector/Bypass project assesses alternatives as part of the first tier screening through the use of the project's purposes identified within the long-term transportation planning horizon year of 2035. The multi-step screening process was initially described in detail in the Alternatives Development and Analysis Report (April 2008) and is summarized the Draft EIS. Additional consideration of alternatives also was given in the Final EIS and in the Draft Supplemental Final EIS as a result of comments received from the public and environmental resource and regulatory agencies. This entire process is described in Section 2 of the Draft Supplemental Final EIS. The NCDOT evaluated a range of reasonable alternatives and gave extensive treatment to preliminary and detailed study alternatives in their comparison, including alternatives for upgrading existing US 74.

Appendix B in the Draft Supplemental Final EIS includes a table that summarizes the history of Improve Existing US 74 Alternatives in the project development process for the Monroe Connector/Bypass. The different types of improvements evaluated include TSM Alternatives, widening US 74 as a standard arterial, improving US 74 as a controlled-access highway, and improving US 74 as a superstreet. These alternatives evaluated US 74 from I-485 to just east of Wingate (including the existing interchanges on US 74). As summarized in the appendix, all of these alternatives were eliminated because they were unable to fulfill the project's defined screening measures and therefore were not considered reasonable.

As discussed and listed in Section 2.4 of the Draft Supplemental Final EIS, majority of the *2007 US 74 Corridor Study* short-term recommendations, and other improvements, have been implemented by NCDOT along the existing US 74 corridor, including signal timing optimization, signal phasing modification, increased turn lane storage lengths, and lane assignment modification. Additionally, all recommended long-term improvements, with the exception of converting the intersections of US 74 with Stallings Road, Indian Trail-Fairview Road and Unionville-Indian Trail Road to a superstreet facility, have been implemented, including implementation of a closed loop signal system and addition of lanes at some intersections as listed in Section 2.4 of the Draft Supplemental Final EIS.

As presented in Draft Supplemental Final EIS Section 1.2.4, to account for improvements to the US 74 corridor since the Final EIS was published, travel times have been updated using actual field data, as documented in the memorandum titled *US 74 Corridor Travel Time Comparison* (HNTB, May 2013). The traffic study found that based on the improvements made, the US 74 corridor under current conditions fails to meet the project defined high speed screening measure. In addition, conditions are not expected to improve in the future due to a forecasted increase in volumes ; therefore average travel times in 2035 are expected to be longer and average travel speeds are expected to decrease.

In August 2013, NCDOT authorized $6.1 million in funding from the Highway Safety Improvement Program to convert four intersections on US 74 in Indian Trail to superstreet facilities. These improvements, scheduled for construction in late 2015, will generally complete the long-term improvements recommended in the *2007 US 74 Corridor Study*. It is important to note that the *2007 US 74 Corridor Study* recommended that three intersections on US 74 (Stallings Road, Indian Trail-Fairview Road, and Unionville-Indian Trail Road) be converted to superstreet facilities. The funded NCDOT project will convert four intersections on US 74 (Indian Trail-Fairview Road, Unionville-Indian Trail Road, Faith Church Road, and Sardis Church Road) to superstreet facilities. The Stallings Road intersection will be reconstructed as part of the Monroe Connector/Bypass project.

Even with these additional superstreet improvements, existing US 74 would be overwhelmed by projected 2035 traffic in the corridor, and would not meet the purposes identified as part of the Monroe Connector/Bypass project. As summarized in the Draft Supplemental Final EIS Section 2.4 and Appendix B, improving existing US 74 as a superstreet was evaluated and the study showed that in the design year 2035, US 74 is expected to exceed LOS D in the majority of the corridor and would operate at speeds less than 50 MPH.

In conclusion, as OCL recommends, the short-term recommendations contained in the 2007 US 74 Corridor Study and other improvements have already been implemented along existing US 74. In addition, the long-term recommendation to convert a segment of existing US 74 to a superstreet is scheduled for construction in late 2015. OCL recommends the Stantec report improvements be evaluated for their long-term ability to serve traffic. As described above and as part of the Monroe Connector/Bypass alternatives development process, a variety of improvements to existing US 74

were evaluated through the years 2035 and found to be unable to fulfill the project's purpose to allow for high-speed regional travel consistent with the designations of the NC SHC program and the NC Intrastate System. Upon review of the OCL recommendations in concert with the evaluation completed as part of the development and analysis complete for the Draft Supplemental Final EIS, we have determined that no additional analyses is warranted.

The public, state and federal resource and regulatory agencies were involved throughout the project development process. Numerous opportunities for involvement were provided to solicit and obtain input and comment, beginning at the initial development of the project's purpose and need, and continuing through the determination of the range of reasonable alternatives for detailed study and beyond. Comments were accepted at any time, with formal opportunities provided at milestones in the process. Opportunities for public input will continue to be provided through this Draft Supplemental Final EIS and subsequent NEPA documentation.

2010 Traffic and Revenue Study: The OCL report offers the following comments and recommendations related to the *2010 Traffic and Revenue Study*. Many of the same comments and recommendations are repeated throughout the report and all relate to the origin-destination (O-D) studies performed as part of the *2010 Traffic and Revenue Study*. These comments are summarized below.

- OCL recommended the WSA origin-destination study be modified by: performing individual commercial traffic and passenger vehicle O-D studies, expanding the data collection area, increasing the number of survey collection points, and increasing the time spent collecting origin-destination data. (Executive Summary, page 15, page 16, page 17, page 19)
- This information should be provided to local decision makers and the local populace prior to any further decisions being made on future transportation projects (Executive Summary, page 19)

Comments on the content of the O-D studies are addressed by CDM Smith (formerly Wilbur Smith Associates) in **Attachment B**. As further detailed in the explanation provided by CDM Smith, the O-D studies are one component of comprehensive study process in the development of the Traffic and Revenue forecast. The procedures used in the O-D survey process and the use of O-D survey results are appropriate to the study's scope and purpose. Therefore no additional O-D studies are required.

The traffic projections developed for the *2010 Traffic and Revenue Study* were used to forecast the revenue potential as part of the financial analysis for the project. The Traffic and Revenue forecasts are not used to evaluate environmental impacts and determine facility design for NEPA compliance. Traffic forecasts used in the NEPA process are described in the Draft Supplemental Final EIS Section 2.5.1. It is important to note that the traffic forecasts used in the Monroe Connector/Bypass EIS process were developed based on data including, but not limited to, traffic counts, historic travel trends, the MUMPO Long Range Transportation Plan, the Metrolina Regional Model (MRM), and existing road network operations. A component in developing and calibrating the MRM was an extensive data collection and analysis process. Included in this process was an O-D study as described in the *Metrolina Region External Travel Survey Report* (MUMPO, May 2003).

Therefore, based on a review of the comments provided by OCL in combination with the *2010 Traffic and Revenue Study* it has been determined that no modifications to the original analysis nor addition analysis need be conducted to inform the NEPA decision making process.

Additional Comments on the OCL Report: The OCL report also recommends that an "all-encompassing transportation study for the local area that accurately models future vehicle movement on US 74 would provide invaluable information to NCDOT, NCTA and other local stakeholders, allowing them to make informed decisions about future transportation projects." (page 17). The all-encompassing transportation study for the area is the Mecklenburg-Union Metropolitan Planning Organization's (MUMPO) 2035 Long Range Transportation Plan and the Metrolina Regional Model (MRM) travel demand model. Therefore, no further action is required as a result of the OCL report.

The OCL report states the "total sum of the differences in delay between the 2015 no build model and the 2015 short-term model is 66.3 seconds for the AM peak hour and 356.4 seconds for the peak hour" on page 8 of the report. However, the OCL report does not indicate which intersection it is referring to or if it is referring to the entire corridor. The stated delay differences do not add up to these values in the corresponding figure (Figure 6).

The OCL report makes definitive statements such as "should be", "required" and "must" that are opinions only and not based on fact. The OCL does not support its qualitative statements and assumptions with engineering or planning analysis.

The OCL report makes recommendations on interchange configuration, laneage improvement and operations issues based solely on driving the corridor and visual observations. No detailed engineering studies were performed to reach these recommendations. For example, on page 13, the OCL report states, "OCL did not perform any engineering analysis on these interchanges. However, based on a visual evaluation, OCL believes delay may occur on US 74 at the Concord Avenue interchange." Potential roadway improvements at these two adjacent interchanges located approximately half a mile apart would be localized in nature, located between signalized intersections on US 74 and not be expected to provide substantial overall corridor travel time benefits. Therefore, no further action is required as a result of the OCL report.

OCL report states it thoroughly reviewed "US 74 Corridor Study" report but later notes OCL did not review the report Appendices.

Conclusion

The comments and recommendations included in the OCL report do not provide new information or require additional studies/analyses, nor do they result in a change in the identification of the Preferred Alternative. In fact, as listed in Section 2.4 of the Draft Supplemental Final EIS, many of the recommendations included in the OCL report regarding upgrades to existing US 74 have already been implemented as projects separate from the Monroe Connector/Bypass. No further action is required as a result of the OCL report.

Attachment A – Stantec Comments

Memo

Stantec

To:	Jennifer Harris, PE NCDOT Project Development Western Region / Turnpike	From:	Paul Koch, PE, AICP 801 Jones Franklin Road Suite 300 Raleigh, NC
File:	171000613	Date:	August 29, 2013

Reference: **Responses to Comments Contained in *A Closer Look at US 74: Challenges and Opportunities* (O'Connell & Lawrence, Inc., 2013) on the *US 74 Corridor Study* (Stantec Consulting Services Inc., 2007)**

The following points are included in the O'Connell & Lawrence, Inc. (OCL) report, specific to the Stantec US 74 Corridor Study. Responses are provided below each comment.

- "...OCL believes additional study is required to thoroughly "complete" the study."

  Response: This statement suggests that this study is somehow directly related to the Monroe Bypass project studies. However, the scope of the US 74 Corridor Study was to evaluate interim operational improvements for a specific segment of US 74. The study assumes ultimate completion of the Monroe Bypass subsequent to the near-term (2015) horizon period of the study.

  The US 74 Corridor Study was not intended to evaluate the Monroe Bypass or any alternatives to the bypass. The goal of the study was to improve level of service based on 2015 traffic. The report states that the interim improvements are recognized as an immediate need because of delays to the Monroe Bypass construction schedule.

- "OCL also recommends Stantec incorporate two existing interchanges into its software model and re-evaluate its traffic projections to better provide a long-term delay model to local decision-makers."

  Response: The scope of the US 74 Corridor Study was to identify interim year (2015) operational improvements that could be implemented using local DOT Division funds. The study was not intended to address larger system-wide improvements. Therefore the study area for analysis was limited to the corridor section where smaller-scale improvements could be quickly implemented, with relatively minor right-of-way implications. The selected study area provided the traffic data necessary to satisfy the study's purpose.

- "OCL believes it is reasonable to assume that some benefits would extend over a longer term that matches the Monroe Bypass/Connector timeline; therefore, Stantec's report should be projected further in the future to determine if these recommendations could provide necessary long-term relief to residents in a cost-effective manner."

Reference: Responses to Comments Contained in *A Closer Look at US 74: Challenges and Opportunities* (O'Connell & Lawrence, Inc., 2013) on the *US 74 Corridor Study* (Stantec Consulting Services Inc., 2007)

Response: The scope of the US 74 Corridor Study is specific to interim improvements that address immediate traffic needs in an attempt to bridge the gap until the completion of the Monroe Bypass. The study assumed that the Monroe Bypass would eventually be constructed, but is not intended to provide alternatives to it. Rather it provides interim congestion relief as a "band-aid" measure until larger system-wide improvements, such as the bypass project, are implemented. Hence the shorter (2015) time frame for the design period.

Based on the specific scope and purpose of the US 74 Corridor Study, there is no plan or intent to expand either the study area or the design period. The study accomplished its stated goal of identifying interim year (2015) operational solutions, many of which have been constructed.

- "The subject stretch of US 74 reviewed by Stantec includes two larger interchanges [Concord Avenue, Skyway Drive] that are not discussed in the Stantec report." ... "Additional solutions, such as increasing the lengths of the on/off ramps or modifying the interchange configuration, should also be investigated. This interchange should be included in the expanded Stantec study to determine if total overall total delay will be impacted by the current intersection configuration."

  Response: The scope of the US 74 Corridor Study was limited to interim operational improvements to extend the corridor's traffic operations until completion of the Monroe Bypass. These interim improvements would mostly be constructed using local DOT Division funds and have minor, if any, right of way implications. The scope was not intended to address larger-scale items such as interchange reconfigurations.

  The anticipated costs and direct impacts of interchange improvements would exceed the cost and schedule constraints associated with the purpose of this study. Such improvements would likely require additional right-of way and trigger environmental review, rendering their implementation during the 2015 design period unrealistic.

Stantec Consulting Services Inc.

Paul Koch, PE, AICP
Principal
paul.koch@stantec.com

cc: File

Attachment B – CDM Smith Comments

CDM Smith
900 Chapel Street, Suite 1400
New Haven, Connecticut 06510
tel: 203 865-2191
fax: 203 624-0484

August 30, 2013

Jennifer Harris
Western Region/Turnpike
Project Development Section Head
Project Development & Environmental Analysis Unit
NC Department of Transportation
Century Center Bldg. A
1000 Birch Ridge Drive
Raleigh, NC 27610

Subject: Southern Environmental Law Center Review of Monroe Investment Grade Traffic and Revenue Study

Dear Ms. Harris:

This letter is in response to a report prepared by O'Connell & Lawrence, Inc. (OCL) titled "A Closer Look at US 74: Challenges & Opportunities". OCL prepared the report at the request of the Southern Environmental Law Center (SELC). In this report, OCL indicates they conducted a detailed review of Wilbur Smith Associates (now CDM Smith) comprehensive traffic and revenue study report for the Monroe Bypass/Connector. However, the report by OCL focuses and comments on only one single element of the comprehensive study, specifically the origin and destination (OD) survey. This letter provides some background on the OD survey process, responds to specific comments and recommendations by OCL, and discusses the general approach of how the OD patterns are reflected in the trip tables used by CDM Smith in our modeling process.

OD Surveys

OD surveys are typically conducted for comprehensive traffic and revenue studies for two main purposes. One purpose is to provide information to the rating agencies and potential investors about the trip attributes and the major commuting patterns of the drivers in the study area. The second purpose is to validate the major travel patterns inherent in the travel demand model against real world observations.

While the collection of travel pattern data has recently advanced due to significant market penetration of cellular phones, it is still common practice in traffic and revenue studies to hand/mail out surveys or provide invitations to on-line surveys to gather information on drivers utilizing specific roadway links in a study area. These links are chosen specifically because they represent critical locations of potential market demand for a new toll road, such as the Monroe Bypass.

WATER + ENVIRONMENT + TRANSPORTATION + ENERGY + FACILITIES

For the Monroe Comprehensive traffic and revenue study, nearly 24,000 surveys were handed out at 10 locations, with more than 3,600 (15%) valid surveys returned. Chapter 3 of CDM Smith's Comprehensive Traffic and Revenue Study Report presents a description and summary analysis of the OD survey.

OCL Recommendations and CDM Smith Responses

The following discussion includes OCL's recommendations and CDM Smith responses.

1. OCL Recommendation – "Perform individual commercial traffic and passenger vehicle traffic O-D surveys."

    a. CDM Smith Response - Typically truck drivers do not respond to mail-back survey requests, and it is often problematic to identify the person making the decisions regarding route choice for a truck driver. Survey responses are usually less than 1 or 2 percent at best for trucks. However there are ways to get surveys from trucks, such as visually collecting the phone numbers/company names off of truck-cab doors at survey sites, and conducting phone interviews regarding route patterns and the potential for paying tolls or staying on the non-tolled road. This takes substantially more time and budget compared to mail-back surveys.

    Another approach is to do direct interviews at major rest areas near the corridor. However, under both these approaches, you lose the ability to "tie" the survey to a specific roadway link and therefore lose the ability to "factor" the surveys to a specific count, time of travel, and validate modeled truck patterns. There are pro's and con's to every approach, including cost implications. Since cars account for most of the demand in the corridor, the survey approach was geared toward obtaining a successful survey of passenger vehicles.

2. OCL Recommendation - "Expand the data collection area to include sites inside the Charlotte outer loop, including locations in Mathews, Charlotte, and other population centers."

    a. CDM Smith Response - The ten locations selected by CDM Smith were appropriate because they were identified as having drivers with the most potential to use the proposed Monroe Bypass. For example, survey stations 8, 9, and 10 were setup in the northbound direction near the northern end of where the Monroe Bypass would operate, capturing movements of current demand that would be eligible to use the Monroe Bypass. Stations 3, 5, and 9 were located on the existing US 74 and are most important as these drivers are the critical market for the new toll facility.

Table 3-2 and 3-3 of the Comprehensive Traffic and Revenue Study Report provide a breakdown of the origins and destinations from the survey stations. Since the survey locations at Stations 3, 5, and 9 were performed in the northbound direction only, and account for approximately 50 percent of the total valid surveys returned, cities such as Charlotte would not be shown to include a high percentage of origins as shown in Table 3-2. However, significant destinations are shown for Charlotte and Mathews because of this same reason. Conducting surveys in Charlotte or population centers would have resulted in many survey forms from motorists that would not use the Monroe Bypass. That would have added greatly to the cost of processing the surveys and a significant portion of surveys that would have been discarded.

3. OCL Comment – "Only 5.6% of both peak hour and non-peak hour trips used in the O-D study originated in Charlotte: however, 26.8% of the trips in the study area ended in Charlotte. This substantial disparity indicates that the location of the handout locations should have been adjusted to provide a better cross-section of drivers."

    a. CDM Response - This was not a function of survey locations, but the direction of the survey operation as discussed in our previous response. Also, we assume all reported trips in the surveys are round trips, so the higher representation of trips that ended in Charlotte are also used as trips that originated in Charlotte. The valid survey trips are reversed and assigned to either the opposite peak hour or off-peak hours. This reversing process also accounts for the significant amount of PM return traffic that would be originating in Charlotte and destined for Monroe for example. There is no disparity or need to adjust the location of the surveys.

4. OCL Recommendation - "Expand the amount of time spent collecting data to account for variations in travel patterns by collecting data at each location for at least one month."

    a. CDM Response – Table 2-4 of the Comprehensive Traffic and Revenue Study shows the monthly variations for secondary roadways. This particular corridor is not subject to significant seasonal or monthly variations. The trips in the US 74 corridor mainly consist of work, company business, school, and shopping trips, further indicating a fairly consistent and stable set of travel patterns. Furthermore, most travel demand models represent an "average" condition, and so the O-D survey was conducted during March and April when conditions most resembled an average condition. Other factors need to be taken into consideration as well when thinking of extending a survey for a significant length of time such as the return on the investment of time and cost, delay to motorists, and survey fatigue. Even in our one or two day O-D surveys, motorists stop taking surveys come the second day.

CDM Smith Survey Merging Process

CDM Smith geo-codes the origin and destination of each valid survey to transportation analysis zones (TAZs) of the travel demand model. Larger "superzones" are then developed by aggregating TAZs. The surveys at the specific survey sites are also factored to average weekday volumes. Select links are then performed at the survey links in the travel demand model and model O-D pairs for trips using these links are aggregated to the same superzones. The model superzone to superzone movements are then compared to the survey superzone to superzone movements and the model trip table patterns are adjusted as needed to reflect the survey patterns. This process keeps the smaller TAZ trip distribution within the superzones intact, while providing the benefit of adjusting superzone to superzone patterns to reflect real world measurements and patterns. This process was developed to take out any sample size bias at the TAZ level that might occur from an O-D survey. As with any data collection effort, the level of accuracy diminishes with a finer level of disaggregation.

We sincerely appreciate the opportunity to continue to provide assistance to NCDOT. We trust this response meets your needs.

Sincerely,

Scott A. Allaire

Scott A. Allaire
Vice President
CDM Smith Inc.

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450 601 WEST ROSEMARY STREET, SUITE 220 CHAPEL HILL, NC 27516-2356 Facsimile 919-929-9421

March 6, 2013

Via E-mail and U.S. Mail
Gen. Anthony J. Tata
Secretary of Transportation
NC Department of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501
AJTata@ncdot.gov

Re: Monroe Connector/Bypass: Clarification of Purpose and Impacts

Dear Secretary Tata:

I am writing to address the continued confusion surrounding the purpose and impacts of the proposed Monroe Bypass. We appreciated the opportunity to discuss this with you in person in January. Since that time, however, additional facts have come to light which demonstrate that deep misunderstandings about the nature of the project persist in local communities affected by the project. We are therefore asking you, as North Carolina Secretary of Transportation, publicly to set out clearly the purpose and likely impact of the project, so that local decision-makers and the public at large can make informed choices.

As you may be aware, the Union County Chamber of Commerce has recently circulated a resolution supporting the Monroe Bypass to a number of local elected bodies. The resolution lists several reasons as to why Union County residents should support the Bypass. The vast majority of those reasons are directly contradicted by NCDOT's recent findings and analyses.

For example:

- The resolution states that the Bypass will bring significant economic growth to the County.

  By contrast, NCDOT has stated that there will be little change in growth as a result of building the Bypass. In fact, NCDOT has concluded that Union County's current and future growth relates to factors such as available land, high median incomes and good school districts, rather than commute times.

- The resolution states that the Bypass is needed to open U.S. 74 for local traffic.

  By contrast, NCDOT has stated that improving U.S. 74 is not a purpose of the Bypass. Nor does NCDOT expect to see any significant improvement on U.S. 74 compared to today's traffic volumes as a result of construction of the Bypass.

- The resolution states that the Bypass will significantly improve commute times for Union County residents.

  By contrast, NCDOT's most recent analysis shows that only 92% of the region impacted by the Bypass will not see any improvement in commute time greater than one minute in commute time as a result of the Bypass. The average commute time will be improved by just 18 seconds.

The stark differences between the findings in the resolution and NCDOT's own analyses are described in more detail in the attached annotated resolution. As the State agency responsible for disseminating information about proposed transportation projects, we urge the Department to act swiftly to address these persistent misunderstandings. Local support and decision-making concerning the Monroe Bypass should be based on an accurate understanding of the project and its purpose. Similarly, NCDOT's analysis should be based on an accurate representation of the Bypass's true purpose and anticipated impacts.

As an additional matter, it has come to our attention that a number of local elected officials and other decision-makers are under the impression that NCDOT's decision-making process with regard to the Monroe Bypass is "closed." As you know, federal law requires that the decision making process remain fully open until the public has been fully presented with all relevant information and given an opportunity to supply comments and other input. Only when a federal "Record of Decision" has been published is the decision-making period closed. The importance of this public process was underscored by the ruling on this matter last May by the United States Court of Appeals for the Fourth Circuit.

We respectfully request that you issue a public statement correcting the mistaken statements in the resolution and clarify NCDOT's findings and plans for the Bypass, making clear that the decision-making process regarding the Bypass and other alternative solutions remain very much open, and stating that all public input will be carefully considered during that process.

Thank you,

Kym Hunter
Staff Attorney

CC (Via E-mail and U.S. Mail):

Tim Gestwicki, NCWF
Dean Naujoks, Yadkin Riverkeeper
June Blotnick, Clean Air Carolina
Scott Slusser, NCDOJ
La Nica Allison, NCDOT
Jennifer Harris, NCDOT
John Sullivan, FHWA
Chris Militscher, USEPA
Liz Hair, USACE
Carl E. Pruitt, USACE
Marella Buncick, USFWS
Marla Chambers, NCWRC
Alan Johnson, NCDWQ
Amy Simes, NCDWQ
Bob Cook, MUMPO
Dana Stoogenke, RRRPO
Lynda Paxton, Mayor of Stallings
Bobby G. Kilgore, Mayor of Monroe
John J. Quinn, Mayor of Indian Trail
James P. Taylor, Mayor of Matthews
Kevin Pressley, Mayor of Hembry Bridge
John Ross, Mayor of Lake Park
Bill Braswell, Mayor of Wingate
Larry Simpson, Mayor of Unionville
Representative Dean Arp
Representative Mark Brody
Representative D. Craig Horn
Representative William Brawley
Senator Fletcher L. Hartsell
Senator Gene McLaurin
Senator Tommy Tucker
Dr. Mary Ellis, Union County Public Schools

Encls.

Resolution for Cities, County, Civic Organizations
Annotated by the Southern Environmental Law Center

WHEREAS, Union County's population is expected to grow to 225,878 in 2016- an increase of 24,000 residents over 2010; and

WHEREAS, Union County is one of fastest-growing areas in North Carolina and the country; and

WHEREAS, 50.2 percent of Union County commuters work inside the county while 49.8 percent of Union County commuters work outside of the county; and

WHEREAS, it takes Union County commuters an average of 29 minutes to get to work; and

- NCDOT most recent data show that commuting times in Union County are **only 2-3 minutes higher** than elsewhere in the Charlotte region.[1]

WHEREAS, it takes one out of five Union County commuters more than 45 minutes to travel to work; and

- NCDOT data show that the Monroe Bypass would have **no practical effect on travel times** in Union County or the rest of the region.
- The **most recent data** show that of the areas that would be impacted by the Bypass:
  - 59% would **experience absolutely no change** in average commute time as a result of the Bypass,
  - 33% would experience **less than 1 minute of change** in average commute time.[2]
  - Only 8% would save more than 1 minute in their average commute time.[3]
  - The data show that the absolute maximum time savings is merely 5.7 minutes, and that **the Bypass will save the average driver <u>only 18 seconds</u>**.[4]

WHEREAS, Union County is not served by a limited-access highway; and

WHEREAS, improving Union County's transportation infrastructure promotes employment opportunities; and

- NCDOT's experts have found that Union County has maintained a comparatively high rate of growth for the past two decades despite slightly longer commutes.[5]
- Because Union County's commute time does not vary significantly from other localities in the region, NCDOT's experts have concluded that development in Union County is based on issues rather than commute time.[6]

---

[1] Baker Engineering, Presentation before the Monroe Connector Bypass Agencies, *Monroe Connector/Bypass Agency Update: Indirect and Cumulative Analysis Review*, at slide 16 (October 17, 2012), Attachment 1.
[2] *Id.*
[3] *Id.*
[4] *Id.*
[5] Baker Engineering, Draft, *Union County Growth Factors* Memo, at 15-17 (Sept. 11, 2012), Attachment 2.

- NCDOT's experts have found that Union County's past growth is attributable to factors such as available land, high median income, and good area schools.[7] They predict that growth will continue to be chiefly influenced by these factors rather than commute time.[8]

WHEREAS, According to the Bureau of Labor Statistics, North Carolina's unemployment rate was 9.2 percent in December 2012; and

WHEREAS, Union County's unemployment rate stood at 8.1 percent in December 2012; and

- NCDOT expects less than 1% growth as a result of building the Bypass.[9] The Bypass is not anticipated to bring jobs to the region.

WHEREAS, with the value of residential property at 85 percent of the property tax base, Union County has a limited tax base, making the county highly dependent on property tax collections; and

WHEREAS, a 2010 Union County Chamber of Commerce study found expanding the county's commercial tax base from 15 percent to up to 30-40 percent by 2014 could reduce the need for personal property tax increases and/or reductions in county quality of life; and

WHEREAS, the Union County Chamber of Commerce has identified six major industries for location, growth, and expansion in Union County. The six industries consist of four in the manufacturing sector (Advanced Metals, Aerospace, Medical Products, and Building Products), and two in the retail and business services sectors (Retail E-Commerce and Data Center/Support Services); and

- NCDOT's data show that the Monroe Bypass will have little to no impact on Union County's "attractiveness for development."[10] Of the area impacted by the Bypass,
  - 59% had no change in attractiveness for development,
  - 36% had a less than 1% change in attractiveness for development, and
  - Only 5% had a change of more the 1%. Even in these areas, the greatest change was 3.9%.[11]
  - The study concluded the effect on development was negligible.[12]

WHEREAS, higher education plays a critical role in promoting economic development; and

WHEREAS, Wingate University, located in Union County, is listed 6th among Best Value colleges and universities in the South based on quality and net cost according to the ranking of the nation's top schools in U.S. News & World Report's 2012 Best Colleges; and

[6] *Id.* at 15.
[7] *Id.* at 9-14.
[8] *Id.*
[9] Monroe Connector/Bypass, Final Environmental Impact Statement (FEIS) at 2-45.
[10] Christina Shumate, *STIP R-3329/R-2559 Monroe Connector/Bypass Updates and Additional Analyses Since The Rescinding Of The Record Of Decision*, memorandum to file (Draft) (Feb. 11, 2013), Attachment 3.
[11] *Id.*
[12] *Id.*

WHEREAS, Wingate University is a fast growing higher education institution - growing 145 percent since 1992; and

WHEREAS, Wingate University serves 2,700 students; and

WHEREAS, Wingate University has a goal of growing its student population to 3,500 over the next few years; and

WHEREAS, Wingate University is conducting a $75 million campaign to support scholarships, programs and new buildings; and

WHEREAS, providing a limited access highway would reduce commuter travel time to the University and encourage student population growth;

- NCDOT data show that the Monroe Bypass would have no practical effect on travel times in Union County or the rest of the region.
- The **most recent data** show that of the areas that would be impacted by the Bypass, 59% would **experience absolutely no change** in average commute time as a result of the Bypass, 33% will experience **less than 1 minute of change** in average commute time, and only 8% would save more than 1 minute on their average commute time.[13]
- The data show that the absolute maximum time savings is 5.7 minutes, and that **the Bypass will save the average driver only 18 seconds**.[14]

WHEREAS, having appropriate transportation infrastructure is important to promoting the health and well-being of Union County residents; and

WHEREAS, Union EMS treated and transported 12,345 patients in 2010-11; and

WHEREAS, the average emergency response time increased Union County between 2009-10 and 2010-11, going from 8.65 minutes to 9.08 minutes; and

WHEREAS, according to the American Heart Association, brain death and permanent death start to occur in 4-6 minutes after someone experiences cardiac arrest; and

WHEREAS, studies showing that a victim's chances of survival are reduced by 7-10 percent with every minute that passes without defibrillation and advanced life support intervention. Few attempts at resuscitation succeed after 10 minutes; and

[13] Baker Engineering, Presentation before the Monroe Connector Bypass Agencies, *Monroe Connector/Bypass Agency Update: Indirect and Cumulative Analysis Review*, at slide 16 (October 17, 2012), Attachment 1.
[14] *Id.*

WHEREAS, according to Union EMS, crowded highways are a significant reason for the increase in response times; and

- Building the Bypass might make these problems worse throughout the County. NCDOT has stated that it is not in favor of changes to U.S. 74 that would have a competing interest with the Bypass.[15]
- NCDOT-commissioned studies have shown that there are better, less costly solutions to decrease congestion in Union County. Improvements to U.S. 74, such as superstreet upgrades, better traffic signal optimization, and patching up the locals businesses and side streets with service roads could have significant impacts on Union County.[16]
- Existing U.S. 74 is currently designated as a Strategic Highway Corridor (SHC) by the North Carolina Department of Transportation,[17] a special status which affords the roadway a prioritized avenue for access to funding for improvements.[18] Construction of the Bypass would remove the SHC designation from existing U.S. 74 to the Toll Highway.[19] NCDOT has neither studied nor explained the impact to U.S. 74 of removing this designation.

WHEREAS, 60 percent of Union EMS transports went to CMC Union while 40 percent went out of county in 2010-11; and

WHEREAS, addressing transportation congestion would promote Union County's quality of life; and

- NCDOT's own experts have found that U.S. 74 can be improved without building the Bypass. Improvements to U.S. 74 such as superstreet upgrades, better traffic signal optimization, and patching up the local businesses and side streets with service roads could have significant impacts on Union County.[20]

WHEREAS, U.S. Highway 74 congestion has proved to be a long-term and growing issue; and

- NCDOT states that improving U.S. 74 is not a stated purpose of the Bypass, nor is it an anticipated result.[21]

[15] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 4 (Jan. 18, 2011), Attachment 4.
[16] Stantec Consulting Services, *US 74 Corridor Study, Union County, NC*, prepared for the NCDOT Division 10 (July 2007), Attachment 5.
[17] NORTH CAROLINA GENERAL STATUTE § 136-178.
[18] *See, e.g.*, NCDOT, Strategic Highway Corridors Project Planning and Design, *available at* http://www.ncdot.gov/doh/preconstruct/tpb/shc/implementation/Project/; NCDOT, Strategic Highway Corridors Long-Range Planning, *available at* http://www.ncdot.gov/doh/preconstruct/tpb/shc/implementation/Systems/.
[19] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 2 (Jan. 18, 2012), Attachment 4.
[20] Stantec Consulting Services, *US 74 Corridor Study, Union County, NC*, prepared for the NCDOT Division 10 (July 2007), Attachment 5.
[21] *Id.* at 3; *see also* PBS&J, *Statement of Purpose and Need: Mecklenburg and Union Counties Monroe Connector/Bypass*, at 2-3 (February 2008).

- NCDOT's analysis indicates that congestion on existing U.S. 74 would not be much improved with construction of the Bypass.[22]
- NCDOT recently confirmed that it does not expect dramatic improvements to congestion on U.S. 74 as a result of the Bypass, recognizing that U.S. 74 would still experience heavy traffic even if the Bypass were constructed.[23]
- There are better, less costly, solutions to improve U.S. 74 such as superstreet upgrades, better traffic signal optimization, and patching up the locals businesses and side streets with service roads could have significant impacts on Union County.[24]

WHEREAS, the Port of Wilmington is one of the few South Atlantic ports with readily available berths and storage areas for containers and cargo; and

WHEREAS, U.S. 74 is the main route between Charlotte and Wilmington and many large commercial trucks use U.S. 74 through Union County to travel to and from the Port of Wilmington; and

- NCDOT has not studied how much traffic on U.S. 74 is local traffic, versus through traffic.[25] There is therefore insufficient data regarding the number of trucks that pass through Union County on U.S. 74.

WHEREAS, heavy usage by commercial vehicles causes damage to roadways; and

WHEREAS, area visitors use U.S. 74 as a route to the coast; and

- NCDOT has not studied the extent to which the corridor is used as a route to the coast.

WHEREAS, out-of-town commuters use the highway to travel across the county; and

- NCDOT has not studied the percentage of travelers who are passing through the county rather than making local trips within the corridor.

WHEREAS, for the economic health of this community, we need a solution to congestion; and

- Improving local congestion is not a stated purpose of the Bypass nor an anticipated result.[26]

[22] *See, e.g.*, Monroe Connector/Bypass Draft EIS, Table 2-7.
[23] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 4 (Jan. 18, 2011), Attachment 4.
[24] Stantec Consulting Services, *US 74 Corridor Study, Union County, NC*, prepared for the NCDOT Division 10 (July 2007), Attachment 5.
[25] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Realtor Meeting Notes, at 2 (Jan. 18, 2011), Attachment 6.
[26] PBS&J, *Statement of Purpose and Need: Mecklenburg and Union Counties Monroe Connector/Bypass*, at 2-3 (February 2008).

- NCDOT recently stated that the agency "would not be in favor of changes to U.S.-74 [sic] that would have a competing interest with the bypass,"[27] as such improvements would have a negative impact on toll revenue.

WHEREAS, the Monroe Connector-Bypass project has been years in the planning stages; and

WHEREAS, many due to delays in the project, many Union County residents are not able to sell or renovate their homes, properties or businesses; and

WHEREAS, the Monroe Connector-Bypass project, a 19.7-mile long new location roadway from U.S. 74 at 1-485 in eastern Mecklenburg County to U.S. 74 between the towns of Wingate and Marshville in Union County, has been proposed; and

WHEREAS, the Monroe Connector-Bypass will improve mobility and capacity within the area by providing a facility for the U.S. 74 corridor that allows for high-speed regional travel consistent with the designations of the North Carolina Strategic Highway Corridor program and the North Carolina Intrastate System, while maintaining access to properties along existing U.S. 74; and

- Removing U.S. 74's Strategic Highway Corridor designation may have disastrous impacts on U.S. 74's eligibility for funding for improvements.[28]
- NCDOT has neither studied nor otherwise addressed this issue.

WHEREAS, the Monroe Connector-Bypass would provide commuters with another transportation choice that could save them 20 to 50 minutes of drive time; and

- NCDOT's most recent data show no significant travel time savings for locals will result from the Bypass, especially not anything this dramatic.
- The **most recent data** show that of the areas that would be impacted by the Bypass, over 90% would experience less than a minute's difference in their average commute time, and only 8% would save more than 1 minute on their average commute time.[29]
- The data show that the absolute maximum expected time savings is 5.7 minutes, and that **the Bypass will save the average commuter <u>only 18 seconds</u>**.[30]

WHEREAS, according to a study by Texas A&M University, traffic congestion puts 56 billion pounds of additional carbon dioxide- about 380 pounds per auto commuter- into the air; and

- Transportation analysts have consistently found that increased road capacity is correlated with increased traffic volume.[31] Traffic congestion tends to maintain a self-limiting

[27] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 4 (Jan. 18, 2011), Attachment 4.
[28] *Id.* at 2.
[29] Baker Engineering, Presentation before the Monroe Connector Bypass Agencies, *Monroe Connector/Bypass Agency Update: Indirect and Cumulative Analysis Review*, at slide 16 (October 17, 2012), Attachment 1.
[30] *Id.*

equilibrium; while road expansion may reduce congestion in the short term, it attracts additional peak-period trips until congestion again reaches a level that limits further growth.[32]
- Building the Bypass is unlikely to impact congestion over the long run, but is likely to increase overall traffic in Union County. If the growth the Chamber of Commerce expects does occur, the Bypass will result in a much great number of cars on the road. This additional traffic, combined with continued congestion on U.S. 74, may exacerbate these air quality impacts.
- There are better solutions to air quality concerns, such as improving U.S. 74.

WHEREAS, building the Monroe Connector-Bypass would free up the traffic congestion for local residents to shop, entertain, etc; and

- The purpose of the Bypass is not to improve access along U.S. 74.[33]
- NCDOT has stated that it is not in favor of improvements to U.S. 74 that would have a competing interest with the Bypass, as such improvements would have a negative impact on toll revenue.[34]
- Constructing the Bypass may have great impacts on U.S. 74's eligibility for funding for improvements, as the Bypass would remove U.S. 74's Strategic Highway Corridor designation.[35]
- The revised traffic volume estimates presented in the EIS indicate that traffic volume on U.S. 74 would not improve if the Bypass were constructed.[36]

WHEREAS, the Monroe Connector-Bypass would also support and promote already existing local businesses along U.S. 74; and

- NCDOT has been clear that building the Bypass is neither intended nor expected to improve access along US 74.[37]

WHEREAS, the Monroe Connector-Bypass project will create hundreds of jobs in our community, establish a limited-access highway in Union County, and improve transportation and the quality of life in Union County; therefore, be it

- NCDOT's own analysis predicts less than 1% growth as a result of the Bypass.[38]

[31] *See, e.g.*, MARK HANSEN, ET AL. (1993), AIR QUALITY IMPACTS OF URBAN HIGHWAY CAPACITY EXPANSION: TRAFFIC GENERATION AND LAND USE CHANGES, at 2-8–2-14, 2-28–2-29.
[32] *See, e.g.*, Todd Litman, *Generated Traffic and Induced Travel: Implications for Transport Planning*, 38-47 INSTITUTE OF TRANSPORTATION ENGINEERS JOURNAL, vol. 71 no. 4, at 2-3 (2001).
[33] PBS&J, *Statement of Purpose and Need: Mecklenburg and Union Counties Monroe Connector/Bypass*, at 2-3 (February 2008).
[34] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 4 (Jan. 18, 2011), Attachment 4.
[35] *Id.* at 2.
[36] Monroe Connector/Bypass Draft EIS, Table 2-7.
[37] PBS&J, *Statement of Purpose and Need: Mecklenburg and Union Counties Monroe Connector/Bypass*, at 2-3 (February 2008); Stantec Consulting Services, *US 74 Corridor Study, Union County, NC*, prepared for the NCDOT Division 10, at 3 (July 2007), Attachment 5.

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RESOLVED, That support the Monroe Connector-Bypass for Union County and encourages state and federal officials to move quickly to begin the construction of the bypass.

[38] Monroe Connector/Bypass, Final Environmental Impact Statement (FEIS), at 2-45.

Table A-2: Southern Environmental Law Center

Document: i002 Letter dated March 6, 2013

COMMENT NO.	COMMENT	RESPONSE
1	• We are therefore asking you, as North Carolina Secretary of Transportation, publicly to set out clearly the purpose and likely impact of the project, so that local decision-makers and the public at large can make informed choices.	The Draft Supplemental Final EIS represents the public statement which addresses the changes and new information that NCDOT has identified and evaluated to determine the impacts of the project. The Draft Supplemental Final EIS will be made available to the public for their review and comment.
2	• As you may be aware, the Union County Chamber of Commerce has recently circulated a resolution supporting the Monroe Bypass to a number of local elected bodies. The resolution lists several reasons as to why Union County residents should support the Bypass. The vast majority of those reasons are directly contradicted by NCDOT's recent findings and analyses. For example: o The resolution states that the Bypass will bring significant economic growth to the County. By contrast, NCDOT has stated that there will be little change in growth as a result of building the Bypass. In fact, NCDOT has concluded that Union County's current and future growth relates to factors such as available land, high median incomes and good school districts, rather than commute times. o The resolution states that the Bypass is needed to open U.S. 74 for local traffic. By contrast, NCDOT has stated that improving U.S. 74 is not a purpose of the Bypass. Nor does NCDOT expect to see any significant improvement on U.S. 74 compared to today's traffic volumes as a result of construction of the Bypass. o The resolution states that the Bypass will significantly improve commute times for Union County residents. By contrast, NCDOT's most recent analysis shows that only 92% of the region impacted by the Bypass will not see any improvement in commute time greater than one minute in commute time as a result of the Bypass. The average commute time will be improved by just 18 seconds.	NCDOT and FHWA appreciate and understand the position of the Union County Chamber of Commerce. However, the Draft Supplemental Final EIS presents data and analysis of the growth likely to occur in the project area. It also highlights and summarizes other research of future growth projections in Union County.
3	• As an additional matter, it has come to our attention that a number of local elected officials and other decision-makers are under the impression that NCDOT's decision-making process with regard to the Monroe Bypass is "closed." As you know, federal law requires that the decision making process remain fully open until the public has been fully presented with all	It is correct that only when a federal "Record of Decision" has been published is the decision-making period closed.

Table A-2: Southern Environmental Law Center

Document: i002 Letter dated March 6, 2013

COMMENT NO.	COMMENT	RESPONSE
	relevant information and given an opportunity to supply comments and other input. Only when a federal "Record of Decision" has been published is the decision-making period closed. The importance of this public process was underscored by the ruling on this matter last May by the United States Court of Appeals for the Fourth Circuit.	
4	• We respectfully request that you issue a public statement correcting the mistaken statements in the resolution and clarify NCDOT's findings and plans for the Bypass, making clear that the decision-making process regarding the Bypass and other alternative solutions remain very much open, and stating that all public input will be carefully considered during that process.	The Draft Supplemental Final EIS represents the NCDOT's public statement on the Monroe Connector/Bypass. Once published, the public will have an opportunity to review and comment on it.
5	• NCDOT most recent data show that commuting times in Union County are **only 2-3 minutes higher** than elsewhere in the Charlotte region.	It is true that Union County has one of the highest commute times in the region. The 2010 Census data shows the average commute time for Union County residents was 27.8 minutes, which was 11 percent higher than the regional average, or approximately 3 minutes higher. This value from the US Census represents average commute times of Union County residents to their actual places of employment (*Indirect and Cumulative Effects Quantitative Analysis Update*, Appendix B, Michael Baker Engineering, Inc., November 2013).
6	• NCDOT data show that the Monroe Bypass would have **no practical effect on travel times** in Union County or the rest of the region. • The **most recent data** show that of the areas that would be impacted by the Bypass: o 59% would **experience absolutely no change** in average commute time as a result of the Bypass, o 33% would experience **less than 1 minute of change** in average commute time. o Only 8% would save more than 1 minute in their average commute time. o The data show that the absolute maximum time savings is merely 5.7 minutes, and that **the Bypass will save the average driver only 18 seconds**.	The commenter's statement that the NCDOT data shows that the Monroe Bypass would have no practical effect on travel times in Union County or the rest of the region is an incorrect interpretation of the project team's work. The commenter's bullets supporting their statement are referencing comparison of results from the MUMPO's Population Projection and Employment Allocation model run without the Monroe Connector/Bypass in the travel time to employment factor to results of the original model run with the Monroe Connector/Bypass in the model, as explained in the Draft Supplemental Final EIS and the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). The ICE Update evaluated the improvements in accessibility and travel time from Union County to employment centers in Mecklenburg County. Expected travel time savings for areas of Union County to and from the US 74/Interstate 485 interchange are displayed in Map 14 of the ICE Update.
7	NCDOT's experts have found that Union County has maintained a comparatively high rate of growth for the past two decades despite slightly longer commutes.	This statement is correct. In addition, many non-NCDOT experts, including Dr. Appold (Assistant Professor at the Kenan Institute at UNC-Chapel Hill) and local planners have found this to be true. Additional information is provided in Section 1.6 and Appendix B of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). In addition, actual census data showed that Union County was the fastest growing county in the state from 2000

Table A-2: Southern Environmental Law Center

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COMMENT NO.	COMMENT	RESPONSE
		to 2010.
8	Because Union County's commute time does not vary significantly from other localities in the region, NCDOT's experts have concluded that development in Union County is based on issues rather than commute time.	The Draft Supplemental Final EIS and Appendix B of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) provide a detailed description of growth trends in the Charlotte region and quantify some of the major growth indicators in the project area. The conclusions presented are based on studies from independent experts and professionals, and not just NCDOT experts.
9	NCDOT's experts have found that Union County's past growth is attributable to factors such as available land, high median income, and good area schools. They predict that growth will continue to be chiefly influenced by these factors rather than commute time.	See response to Comment #8 in this letter (Letter i002).
10	NCDOT expects less than 1% growth as a result of building the Bypass. The Bypass is not anticipated to bring jobs to the region.	NCDOT determined all changes in land use within the project study area from the baseline to the 2030 Build Scenario are within two percent (i.e., between negative one percent and positive one percent) of the change that is predicted for the 2030 No-Build Scenario (ICE Update, Section 5). While NCDOT studied potential changes in land use because the public and resource agencies identified land use changes and their effect on water quality as a potential significant issue for study under NEPA, NCDOT has not specifically projected employment for the project study area, the county, nor the region. Changes in land use that are forecasted related to the project include 1,800 additional residential acres, 300 additional commercial acres, 100 additional industrial acres and 1,100 additional acres of transportation use. These changes in land use would be related to increased employment in the project study area, contrary to the commenter's conclusion.
11	NCDOT's data show that the Monroe Bypass will have little to no impact on Union County's "attractiveness for development." Of the area impacted by the Bypass, • 59% had no change in attractiveness for development, • 36% had a less than 1% change in attractiveness for development, and • Only 5% had a change of more the 1%. Even in these areas, the greatest change was 3.9%. The study concluded the effect on development was negligible.	The commenter's statement that the NCDOT's data show that the Monroe Bypass will have little to no impact on Union County's "attractiveness for development" is an incorrect interpretation of the project team's work. The commenter's bullets supporting their statement are referencing comparison of results from the MUMPO's Population Projection and Employment Allocation model run without the Monroe Connector/Bypass in the travel time to employment factor to results of the original model run with the Monroe Connector/Bypass in the model. The Draft Supplemental Final EIS and the ICE Update explain how NCDOT re-evaluated the effect of the project on results from MUMPO's socioeconomic and land use models. These documents also explain how NCDOT evaluated the project's potential induced growth effect on the project study area.
12	NCDOT data show that the Monroe Bypass would have no practical effect on travel times in Union County or the rest of the region.	This is an incorrect interpretation of the project team's work. See response to Comment #6 in this letter (Letter i002).
13	The **most recent data** show that of the areas that would be impacted by the Bypass, 59% would **experience absolutely no change** in average commute time	See response to Comment #6 in this letter (i002).

Table A-2: Southern Environmental Law Center

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COMMENT NO.	COMMENT	RESPONSE
	as a result of the Bypass, 33% will experience **less than 1 minute of change** in average commute time, and only 8% would save more than 1 minute on their average commute time.	
14	The data show that the absolute maximum time savings is 5.7 minutes, and that **the Bypass will save the average driver only 18 seconds**.	This statement is incorrect. See response to Comment #6 in this letter (i002).
15	Building the Bypass might make these problems worse throughout the County. NCDOT has stated that it is not in favor of changes to U.S. 74 that would have a competing interest with the Bypass.	The commenter has provided no data supporting their conclusion that building the Monroe Connector/Bypass might make these problems worse. Contrary to the commenter's statement, since the Final EIS, numerous improvements have been made to existing US 74, as described in **Section 2.4.** Many of these improvements implement recommendations of the *US 74 Corridor Study* (Stantec, 2007), commissioned by NCDOT Division 10, which has improved traffic flow on the existing facility.
16	NCDOT-commissioned studies have shown that there are better, less costly solutions to decrease congestion in Union County. Improvements to U.S. 74, such as superstreet upgrades, better traffic signal optimization, and patching up the locals businesses and side streets with service roads could have significant impacts on Union County.	As summarized in Section 1 of the Draft Supplemental Final EIS, the NCDOT examined and implemented a variety of minor improvements along existing US 74. In Section 2 of the Draft Supplemental Final EIS, the NCDOT evaluated and re-examined others (i.e. improve existing US 74 alternatives) with a "hard look" and subsequently determined that they were not reasonable and did not require more detailed study. Initial upgrade existing US 74 alternatives included minor TSM improvements and widening as a standard arterial, a superstreet, and a controlled-access highway. Additional evaluations in the Final EIS included TSM Alternative Concept 2 that reflected the recommendations in the *US 74 Corridor Study* (Stantec, 2007). Additional evaluations after the Final EIS included additional analysis of upgrading existing US 74 as a superstreet and a 6-lane superstreet, and widening to a 6-lane arterial. There are no conditions that warrant re-considering new alternatives or updating previous screening decisions. The NCDOT screening-level process and decisions in the EIS remain valid and they are reaffirmed in Draft Supplemental Final EIS, as described in **Section 2**.
17	Existing U.S. 74 is currently designated as a Strategic Highway Corridor (SHC) by the North Carolina Department of Transportation, a special status which affords the roadway a prioritized avenue for access to funding for improvements. Construction of the Bypass would remove the SHC designation from existing U.S. 74 to the Toll Highway. NCDOT has neither studied nor explained the impact to U.S. 74 of removing this designation.	This statement is incorrect. The current Strategic Highway Corridor (SHC) map for NCDOT Division 10 can be downloaded from https://connect.ncdot.gov/projects/planning/Pages/StrategicHighwayCorridors.aspx The Strategic Highway Corridors Map shows the Monroe Connector/Bypass as the designated Strategic Highway Corridor for US 74, not existing US 74. The project is consistent with local planning documents and NCDOT has studied the impacts of building the project in the study area.
18	NCDOT's own experts have found that U.S. 74 can be improved without building the Bypass. Improvements to U.S. 74 such as superstreet upgrades,	See response to Comment #16 in this letter (i002).

Table A-2: Southern Environmental Law Center

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COMMENT NO.	COMMENT	RESPONSE
	better traffic signal optimization, and patching up the local businesses and side streets with service roads could have significant impacts on Union County.	
19	NCDOT states that improving U.S. 74 is not a stated purpose of the Bypass, nor is it an anticipated result.	As presented in **Section 1.1.2** of the Draft Supplemental Final EIS, "The purpose of the project is to improve mobility and capacity within the project study area by providing a facility for the US 74 corridor from near I-485 in Mecklenburg County to between the towns of Wingate and Marshville in Union County that allows for high-speed regional travel consistent with the designations of the North Carolina SHC program and the North Carolina Intrastate System, while maintaining access to properties along existing US 74."
20	NCDOT's analysis indicates that congestion on existing U.S. 74 would not be much improved with construction of the Bypass.	The commenter's statement that the Monroe Connector/Bypass will not improve US 74 is incorrect. As discussed in **Section 2.5.2** of the Draft Supplemental Final EIS, a comparison of future build and no-build traffic forecasts show that some traffic will divert to the Monroe Connector/Bypass and thus reduce congestion and improve traffic operations along existing US 74 compared to the No-Build Scenario forecasts. The project also will provide a high-speed facility for the US 74 corridor that will operate at acceptable levels of service through 2035.
21	NCDOT recently confirmed that it does not expect dramatic improvements to congestion on U.S. 74 as a result of the Bypass, recognizing that U.S. 74 would still experience heavy traffic even if the Bypass were constructed.	See response to Comment #20 in this letter (i002).
22	There are better, less costly, solutions to improve U.S. 74 such as superstreet upgrades, better traffic signal optimization, and patching up the locals businesses and side streets with service roads could have significant impacts on Union County.	See responses to Comments #15 and 16 in this letter (i002).
23	NCDOT has not studied how much traffic on U.S. 74 is local traffic, versus through traffic. There is therefore insufficient data regarding the number of trucks that pass through Union County on U.S. 74.	This statement is incorrect. Traffic forecasts used in the analyses summarized in the Draft Supplemental Final EIS were reviewed and determined valid for the purposes they were used (*Monroe Connector/Bypass Traffic Forecast Summary*, HNTB, November 2013). The comprehensive final traffic and revenue study (*Final Report Proposed Monroe Connector/Bypass Comprehensive Traffic and Revenue Study*, Wilbur Smith and Associates, October 2010) adequately evaluated local, through and truck traffic that would use the corridor.
24	NCDOT has not studied the extent to which the corridor is used as a route to the coast.	See response to Comment #23 in this letter (i002).
25	NCDOT has not studied the percentage of travelers who are passing through the county rather than making local trips within the corridor.	See response to Comment #23 in this letter (i002).

Table A-2: Southern Environmental Law Center

Document: i002 Letter dated March 6, 2013

COMMENT NO.	COMMENT	RESPONSE
26	Improving local congestion is not a stated purpose of the Bypass nor an anticipated result.	See response to Comment #19 in this letter (i002).
27	NCDOT recently stated that the agency "would not be in favor of changes to U.S.-74 [sic] that would have a competing interest with the bypass," as such improvements would have a negative impact on toll revenue.	See response to Comment #15 in this letter (i002).
28	Removing U.S. 74's Strategic Highway Corridor designation may have disastrous impacts on U.S. 74's eligibility for funding for improvements.	See response to Comment #17 in this letter (i002).
29	NCDOT has neither studied nor otherwise addressed this issue [Strategic Highway Corridor].	This statement is incorrect. See response to Comment #17 in this letter (i002).
30	NCDOT's most recent data show no significant travel time savings for locals will result from the Bypass, especially not anything this dramatic.	This statement is incorrect. See response to Comment #6 in this letter (i002).
31	The **most recent data** show that of the areas that would be impacted by the Bypass, over 90% would experience less than a minute's difference in their average commute time, and only 8% would save more than 1 minute on their average commute time.	This statement is incorrect. See response to Comment #6 in this letter (i002).
32	The data show that the absolute maximum expected time savings is 5.7 minutes, and that **the Bypass will save the average commuter only 18 seconds**.	This statement is incorrect. See response to Comment #6 in this letter (i002).
33	Whereas, according to a study by Texas A&M University, traffic congestion puts 56 billion pounds of additional carbon dioxide – about 380 pounds per auto commuter – into the air, and Transportation analysts have consistently found that increased road capacity is correlated with increased traffic volume. Traffic congestion tends to maintain a self-limiting equilibrium; while road expansion may reduce congestion in the short term, it attracts additional peak-period trips until congestion again reaches a level that limits further growth.	As discussed in **Section 4.2.2** of the Draft Supplemental Final EIS, the Monroe Connector/Bypass project is included in a conforming Long Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP) for National Ambient Air Quality Standards. Traffic forecasts and travel demand modeling for Build and No Build Scenarios are discussed in **Section 2.5** in the Draft Supplemental Final EIS, with further detail provided in the *Monroe Connector/Bypass Traffic Forecast Summary* (HNTB, November 2013).
34	Building the Bypass is unlikely to impact congestion over the long run, but is likely to increase overall traffic in Union County. If the growth the Chamber of Commerce expects does occur, the Bypass will result in a much great number of cars on the road. This additional traffic, combined with continued congestion on U.S. 74, may exacerbate these air quality impacts.	See response to Comment #33 in this letter (i002).

Table A-2: Southern Environmental Law Center

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COMMENT NO.	COMMENT	RESPONSE
35	There are better solutions to air quality concerns, such as improving U.S. 74.	See responses to Comments #16 and 33 in this letter (i002).
36	The purpose of the Bypass is not to improve access along U.S. 74.	See response to Comment #19 in this letter (i002).
37	NCDOT has stated that it is not in favor of improvements to U.S. 74 that would have a competing interest with the Bypass; as such improvements would have a negative impact on toll revenue.	This statement is incorrect. See response to Comment #15 in this letter (i002).
38	Constructing the Bypass may have great impacts on U.S. 74's eligibility for funding for improvements, as the Bypass would remove U.S. 74's Strategic Highway Corridor designation.	See response to Comment #17 in this letter (i002).
39	The revised traffic volume estimates presented in the EIS indicate that traffic volume on U.S. 74 would not improve if the Bypass were constructed.	This statement is incorrect. See response to Comment #20 in this letter (i002).
40	NCDOT has been clear that building the Bypass is neither intended nor expected to improve access along US 74.	This statement is incorrect. See response to Comment #19 in this letter (i002).
41	NCDOT's own analysis predicts less than 1% growth as a result of the Bypass.	See response to Comment #10 in this letter (i002).

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450
601 WEST ROSEMARY STREET, SUITE 220
CHAPEL HILL, NC 27516-2356
Facsimile 919-929-9421

December 3, 2012

Via U.S. Mail

Ms. Jennifer Harris
Director of Planning & Environmental Studies
North Carolina Turnpike Authority
1 South Wilmington Street
Raleigh, NC 27601
jhharris1@ncdot.gov

Re: Monroe Connector/Bypass: Supplemental Environmental Analysis

Dear Ms. Harris:

On behalf of the North Carolina Wildlife Federation, Clean Air Carolina, and the Yadkin Riverkeeper, the Southern Environmental Law Center submits the attached letter, which you also received by email on November 30, 2012. The letter details a number of concerns about the ongoing environmental analysis of the Monroe Connector/Bypass pursuant to the National Environmental Policy Act. The letter also presents additional information, not considered in the initial analysis of the Toll Highway, which we urge you to include in your new analysis.

The attached letter references 90 separate attachments. We have included a hard copy of each attachment with this letter, as well as a CD with an electronic copy of each attachment. We have also included CDs to all parties copied on the original letter.

Please note that the attached letter contains the following three minor changes from the letter emailed to you on Nov. 30:

- We have corrected a pinpoint citation in footnote 95.
- Minor corrections to heading numbers.

Please do not hesitate to contact me if you have any questions about this submission.

Thank you,

Kym Hunter
Staff Attorney

CC (via U.S. mail):

Tim Gestwicki, NCWF
Dean Naujoks, Yadkin Riverkeeper
June Blotnick, Clean Air Carolina
Scott Slusser, NCDOJ
Secretary Gene Conti, NCTA
John Sullivan, FHWA
Chris Militscher, USEPA
Liz Hair, USACE
Carl E. Pruitt, USACE
Marella Buncick, USFWS
Marla Chambers, NCWRC
Alan Johnson, NCDWQ
Amy Simes, NCDWQ
Bob Cook, MUMPO
Dana Stoogenke, RRRPO

Encls.

Table A-3: Southern Environmental Law Center

Document: i003 Letter dated December 3, 2012

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	Clarification	Letter corrected items from SELC 11/30/12 letter (i-004)	No response required.

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450 601 WEST ROSEMARY STREET, SUITE 220 CHAPEL HILL, NC 27516-2356 Facsimile 919-929-9421

November 30, 2012

Via E-mail and U.S. Mail

Ms. Jennifer Harris
Director of Planning & Environmental Studies
North Carolina Turnpike Authority
1 South Wilmington Street
Raleigh, NC 27601
jhharris1@ncdot.gov

Re: Monroe Connector/Bypass: Supplemental Environmental Analysis

Dear Ms. Harris:

On May 3, 2012, the United States Court of Appeals for the Fourth Circuit ruled that the environmental analysis performed for the Monroe Connector/Bypass was arbitrary and capricious. *N.C. Wildlife Fed'n v. N.C. DOT*, 677 F.3d 596 (4th Cir. 2012). Subsequent to the ruling, on July 17, 2012, the Federal Highway Administration ("FHWA") rescinded the Record of Decision ("ROD") for the toll highway. Since that time, the North Carolina Turnpike Authority ("NCTA") has stated its intent to pursue a new approval from FHWA. On behalf of the North Carolina Wildlife Federation, Clean Air Carolina, and the Yadkin Riverkeeper, the Southern Environmental Law Center ("SELC") has continued to monitor additional steps being taken by NCTA in pursuit of a new ROD. These efforts, like the Environmental Impact Statement ("EIS") that came before, fall far short of meeting the requirements of the National Environmental Policy Act ("NEPA").

After closely monitoring NCTA's continued pursuit of the Monroe Bypass/Connector, we have documented below the flaws that we believe persist in NCTA's analysis. While we have not yet been afforded the opportunity to review NCTA's new documentation in its entirety, we have reviewed some of the agency's communications to state and federal resource agencies over the past several months. The comments below stem from our review of those materials and other statements and presentations made by NCTA at public meetings and in the press. The comments below also address new information that has come to light since the publication of the first EIS, which casts substantial doubt on a number of NCTA's analyses and conclusions.

We were invited by NCTA's counsel, Scott Slusser, to submit comments at this stage and hope that our early submission will allow NCTA to address our concerns as it moves forward with its ongoing analysis of the impacts of the Monroe Connector/Bypass and other alternative solutions to transportation issues in Union County. We submit these comments at this time as a

courtesy to NCTA, and in no way waive our right to supplement our comments at a later date. If NCTA does intend to publish a new environmental document under NEPA for the Monroe Connector/Bypass, we will review that document and comment during the public comment period.

I. INTRODUCTION

In its recent opinion, the United States Court of Appeals for the Fourth Circuit held that the environmental analysis of the Monroe Connector/Bypass was arbitrary and capricious. *N.C. Wildlife Fed'n*, 677 F.3d at 596. The Court found "fundamental" errors in NCTA's analysis, which invalidated both the consideration of alternatives and environmental impacts based on the flawed baseline. *Id.*; *see also Friends of Back Bay v. U.S. Army Corps of Engineers*, 681 F.3d 581, 588 (4th Cir. 2012). Accordingly, the Court vacated the earlier judgment of the District Court and remanded the EIS for the transportation agencies to "reevaluate." *N.C. Wildlife Fed'n*, 677 F.3d at 605 n.5.

Despite the clear mandate from the one of the nation's second highest courts to revisit its earlier flawed analysis, NCTA has unfortunately chosen not to address the key errors head on, but rather to merely re-explain its earlier rejected analysis. Consequently, as detailed below, both the impacts analysis and the alternatives analysis for the Monroe Connector/Bypass remain fundamentally flawed. Further, because NCTA has continued to actively pursue construction of the toll highway prior to any opportunity for new public input and prior to a new ROD, the agency has engaged in illegal pre-determined decisionmaking.

II. NCTA'S IMPACTS ANALYSIS IS ARBITRARY AND CAPRICIOUS

1 NCTA's original EIS concluded that the Monroe Connector/Bypass would have less than a 1% impact on growth outcomes.[1] As the Fourth Circuit noted, this conclusion was reached despite the fact that the NEPA process was "devoid of any evidence establishing that the region is developmentally saturated such that a major toll road will have no appreciable environmental impact." *N.C. Wildlife Fed'n*, 677 F.3d at 603 n.2. Rather, the outcome was obtained by reliance on inaccurate models which assumed the construction of the Monroe Connector/Bypass in both "Build" and "No-Build" scenarios. *Id.* at 600. NCTA has indicated that it will not address the reality of this conclusion, nor will the agency correct the flawed model from which the conclusion sprang.

A) The Conclusion that the Twenty-Mile Toll Highway will not Induce Growth is Inconsistent with all other Analyses.

Rather than disclose the true environmental impact of the Monroe Connector/Bypass in a new environmental document, NCTA has stated its intent to stick to the conclusion reached in the original, rejected EIS, that the Monroe Connector/Bypass will make little difference to growth and development patterns in the study area. As explained in more detail below, this doggedly-held position sits at odds with all other analyses of the proposed Bypass, including:

[1] Monroe Connector/Bypass, Final Environmental Impact Statement (FEIS) at 2-45.

- All public and political justifications for the Monroe Connector/Bypass
- Planned developments dependent on the Monroe Connector/Bypass
- Conclusions in other documents produced by NCTA
- Updated forecasts of growth in Union County
- Academic research into the effects of highway construction

i) Public statements by community leaders about the Monroe Connector/Bypass demonstrate that it will bring growth and development to the region.

1) Local Level

2 Local elected officials and other public figures are near united in their belief that the Monroe Connector/Bypass will bring growth and development to Union County. For example, the Union County Chamber of Commerce has acknowledged the Monroe Connector/Bypass's propensity to induce growth, noting it would provide a significant boost to existing businesses and factor into the decision of any business considering operations in the county.[2] It has noted that the Bypass would "greatly enhance" Union County's "competitiveness for office and industrial development,"[3] and stated that "[t]own leaders are preparing for more commercial and residential growth plus increased traffic with completion of the Monroe Bypass freeway."[4] And when addressing a delay in the Bypass, Union County Chamber of Commerce President Sharon Rosché stated: "That's going to delay progress . . . [i]t will delay Union County from doing the things it needs to do to attract different types of businesses and corporations to enhance our economic tax base."[5]

3

4 The Charlotte Chamber of Commerce has also has determined that the Bypass will spur growth. In a recent letter to the Charlotte Observer, Charlotte Chamber Chairman Frank Emory and Chamber President Bob Morgan stated: "That there will be an economic impact of the Garden Parkway and the Monroe Connector is not debatable."[6] They argued that the Bypass is a "critical component" of infrastructure affecting the movement of goods through that area of the state and emphasized that "[t]he fact that road and transportation infrastructure spurs economic development is evident throughout history."[7]

5 Further, the City of Monroe has recognized that the Bypass "could create new commercial development opportunities along the new roadways."[8] And local elected officials,

[2] Adam Bell, *Bypass Delays Concern Business Leaders*, SOUTH CHARLOTTE NEWS (April 24, 2011), *available at* http://www.charlotteobserver.com/2011/04/24/2240539/bypass-delays-concern-business.html#ixzz1WQdfm7Ul#storylink=cpy, Attachment 1.
[3] Union County Chamber of Commerce, *Preliminary Testing Begins for Long Awaited Monroe Parkway*, BUSINESS NEWS 2010 (Feb. 5, 2010), *available at* http://www.unioncountycoc.com/bn-2010.html, Attachment 2.
[4] Union County Chamber of Commerce, Welcome Guide to Union County 2006-07, at 19, Attachment 3.
[5] Adam Bell, *Bypass Delays Concern Business Leaders*, SOUTH CHARLOTTE NEWS (April 24, 2011), Attachment 1.
[6] Frank Emory and Bob Morgan, *Garden Parkway, Monroe Connector Will Boost Area Economy*, CHARLOTTE OBSERVER (May 10, 2012), *available at* http://www.charlotteobserver.com/2012/05/10/3229861/garden-parkway-monroe-connector.html, Attachment 4.
[7] *Id.*
[8] City of Monroe Downtown Master Plan, at 42 (February 2008), Attachment 5.

5 cont such as Indian Trail's Mayor John Quinn, also believe the Monroe Connector/Bypass would cause growth in Union County, stating that the Bypass would decrease traffic on U.S. 74 by a third and open up opportunities for new development.[9]

Several local government entities are currently engaged in the U.S.-74 Revitalization Study, a coordinated effort among groups within the U.S.-74 Corridor to, among other things, plan for the expected growth that is expected to result from the Bypass.[10] The study analyzes the U.S.-74 Corridor by breaking it down into segments, each of which directly corresponds to a planned interchange with the proposed Toll Highway.[11] The Plan's discussion of each segment is often couched in terms of its relation to the Bypass. Regarding the Indian Trail Segment, for example, the Plan posits that "proposed Monroe Bypass will create opportunities for the Town of Indian Trail as well." It expands:

6

> The direct access to the heart of the Town via Indian Trail Road will create an opportunity for a Mixed Use Gateway Development around the intersection of U.S.-74 and Indian Trail Road . . . . This mixed use development will complement downtown Indian Trail and will create a draw for the downtown by attracting motorists from the Monroe Bypass and U.S.-74 corridor. This development could comprise of major retail, residential, and office uses organized in a town-center layout with equal emphasis on pedestrians and bicyclists.[12]

7 Community stakeholders are also anticipating growth from the Bypass. For example, the Charlotte Regional Partnership has called the Monroe Connector/Bypass "a key part of future business growth and prosperity of Union County," stating that the Bypass would be a "business asset" and "a boon for tourists and commuters."[13] And the South Piedmont Community College set out in its Master Plan that "[i]t is anticipated that major growth will occur in the Anson County service area in 2013 when North Carolina Turnpike Authority completes the Monroe Connector/Bypass highway construction project."[14] Recently, a pro-Bypass Facebook group has developed, promoting the Bypass primarily in terms of the road's expected economic impact on Union County.[15]

[9] *Union Co. Official Planning Changes For Major Road*, WSOC-TV (July 27, 2011), *available at* http://www.wsoctv.com/news/news/union-co-officials-planning-changes-for-major-road/nDYzG/, Attachment 6.
[10] HNTB North Carolina, P.C., *U.S.-74 Corridor Revitalization Study: Framework Plan*, at 66 (June 2012), Attachment 7 (noting that "the completion of the Monroe Bypass will create new opportunities for retail development on the north-side of [Union] County").
[11] *Id.* at 83.
[12] *Id.* at 86.
[13] Charlotte Regional Partnership, *Monday Memo: Charlotte Energized* (April 25, 2011), *available at* http://charlotteusa.com/news-media/monday-memo/charlotte-energized/, Attachment 8.
[14] South Piedmont Community College, FACILITIES MASTER PLAN, (May 2008), Attachment 9.
[15] Keep Union County Moving Facebook Group, About, *available at* http://www.facebook.com/KeepUnionCountyMoving#!/KeepUnionCountyMoving/info ("Give drivers a choice! Build the Monroe Connector/Bypass to create jobs, relieve congestion on Highway 74 and improve our economy. . . . Transportation plays a critical role in Union County's economy."), Attachment 10.

2) State Level

8 Analysis from North Carolina State Government, of which NCTA is a part, also contradicts the agency's conclusions. Earlier this year, Lieutenant Governor Dalton and the State's Logistics Task Force published a report that analyzed different transportation and logistics projects in the State of North Carolina.[16] In the report, the Task Force concludes that the Monroe Connector/Bypass is "important or critical" to a number of development projects, including the proposed Legacy Business Park, discussed below, the intermodal Center at the Charlotte Douglas Airport, and the development of potential inland ports in Salisbury and Rowan Counties and Statesville and Iredell Counties.[17]

9 The Logistics Task Force Report also incorporates a study entitled the "Seven Portals Study" which discusses each region of the State in more detail.[18] The report for the Charlotte region describes the connection between the Monroe Connector/Bypass and development in Union County, explaining that manufacturing has been declining in the County and that the additional infrastructure and the proposed Legacy Business Park will be a key piece of bringing it back and attracting new development to the region.[19] Even the North Carolina Maritime strategy cites the Monroe Connector/Bypass as important to increased development in the State.[20]

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10 If it were not enough that State level reports predict significant growth and development from the Bypass, statements from *NCTA itself* have echoed the same message. For example, John Collett, a member of the N.C. Board of Transportation and NCTA Board of Directors, stated in an editorial in the Charlotte Business Journal that the Monroe Connector/Bypass "will create jobs" because it will relieve congestion on a major route into Charlotte by providing an alternative to U.S. 74.[21] He also explained that the Bypass will result in growth because it "will make the region more attractive to industry and tourism and a better location for commercial shippers."[22]

11 Despite statements at every level of Government that the Monroe Connector/Bypass will bring significant growth and development to Union County and beyond, NCTA persists in advancing the fiction in its environmental documents that the project will not impact growth outcomes. NCTA's draft "Union County Growth Factors" Memo states that "transportation infrastructure improvements are not the main driver of the rapid growth in Union County."[23] Rather, the memorandum suggests that income, land availability and school quality are the

[16] *Governor's Logistics Task Force, Final Report*, at 81 (2012), Attachment 11.
[17] *Id.*
[18] S. Gary Teng, Edd Hauser, and Yiping Lu, *Seven Portals Study: An Investigation of Economic Development in North Carolina Through Logistics Villages* (Dec. 31, 2011), Attachment 12.
[19] *Id.* at 40-41.
[20] AECOM, North Carolina Maritime Strategy Final Report, at 86-87, 97, 144-48 (June 26, 2012), Attachment 13.
[21] John Collett, *Bypass Critical in Monroe*, CHARLOTTE BUSINESS JOURNAL (May 13, 2011), *available at* http://www.bizjournals.com/charlotte/print-edition/2011/05/13/bypass-critical-in-monroe.html, Attachment 14.
[22] *Id.*
[23] Baker Engineering, Draft, *Union County Growth Factors* Memo, at 17 (Sept. 11, 2012), Attachment 15.

11 cont driving forces behind growth in the area.[24] The memo thus concludes that the previous conclusions about the Monroe Connector/Bypass in the original EIS remain correct.

NCTA must reconcile these conflicting statements. "The very purpose of public issuance of an environmental impact statement is to 'provid[e] a springboard for public comment.' " *N.C. Wildlife Fed'n*, 677 F.3d at 603 (quoting *DOT v. Public Citizen*, 541 U.S. 752, 768 (2004)). State lawmakers are poised to invest $24 million per year for forty years to the Monroe Connector/Bypass, based on their repeatedly-stated conclusion that the toll road will spur growth and economic development. If that conclusion is untrue, the State must make that clear and explain why the ingrained beliefs of public officials are false and mistaken. Only then can the public know exactly how and why its tax dollars are being spent.

ii) Planned Developments must be accounted for in the EIS

1) Legacy Park

12 As discussed above, numerous high-level state officials and local leaders and stakeholders anticipate significant growth and development from the Bypass. This belief is not derived from vague hopes, but is based on concrete plans. One of the most striking examples of these plans is the proposed Legacy Business Park ("the Park"), a 5,000-acre business park and "inland port" planned to be constructed at the end of the Monroe Connector/Bypass in Wingate.[25] As planned, the Park would be the largest business park in North Carolina and would attempt to bring over 20,000 jobs to the region.[26] Just Phase 1 of the project is itself a massive undertaking involving significant growth: The first stage of Park development involves 1750 acres accommodating 11 rail-served industrial sites, a light industrial site, two office institutional sites, and a rail facility adjacent to the existing CSX rail line.[27] However, the 5,000 acre footprint of the fully built-out park is just a fraction of the development and construction that will result in the event that the Park moves ahead as planned.

13 Plans for the Park make clear that it is integrally connected to the Monroe Connector/Bypass. Indeed, the Park's very feasibility depends on construction of the Toll Highway.[28] A road, "Legacy Parkway," is already planned to connect the park to the Bypass via

[24] *Id.*
[25] Union County Partnership for Progress, *Project Legacy Business Park in Union County, NC*, *available at* http://www.unioncpp.com/legacy/phase1.html, Attachment 16; Ken Elkins, *Union County Plans Huge Industrial Park*, CHARLOTTE BUSINESS JOURNAL (Nov. 19, 2008), *available at* http://www.bizjournals.com/charlotte/stories/2008/11/17/daily26.html, Attachment 17.
[26] Abby Cavenaugh, *New Union Business Park May Have 'Dramatic Impact'*, AnsonRecord.com (Feb. 25, 2009), *available at* http://ansonrecord.com/bookmark/1990185-New-Union-business-park-may-have-%E2%80%98dramatic-impact%E2%80%99#ixzz1WQg9UIrc, Attachment 18; Union County Partnership for Progress, *Union County Partnership Email Newsletter* (February 2009), *available at* http://www.unioncpp.com/news/Feb2009newsletter.html, Attachment 19.
[27] Union County Partnership for Progress, *Project Legacy Business Park in Union County, NC*, *available at* http://www.unioncpp.com/legacy/phase1.html, Attachment 16.
[28] Union County Partnership for Progress, *Project Legacy Plans*, *available at* http://www.unioncpp.com/legacy/index.html, Attachment 20; Dana Stoogenke, Rocky River RPO, *Marshville Special Study* Memo, at 1 (August 20, 2010) (key Park proponent's "main concern is the lack of direct access from the Project Legacy site to the Monroe Connector/Bypass"), Attachment 21.

13 cont the Forest Hill interchange;[29] upon completion of the Monroe Connector/Bypass, the western entrance to Project Legacy would be a short distance to I-485 and allow even faster access to the Charlotte-Mecklenburg area.[30] And even before the Legacy Parkway was publicly proposed, the
14 NCTA recognized the importance of keeping key project proponents engaged in the planning
15 process for the Bypass.[31] As the environmental review process moved forward, NCTA assured local leaders that the Bypass plans would accommodate Park access.[32]

16 Several key state officials and institutions have underscored the growth expected from the Park. For example, Lt. Governor Dalton highlighted the Legacy Park's economic development potential at the Union County Partnership for Progress's 2011 Annual meeting.[33] Dalton discussed the growth likely to result from the Park and noted that transportation projects like the Park's planned rail connections will ensure that Union County will be a part of statewide initiatives to make North Carolina a key East Coast distribution hub. And Keith Crisco, N.C. Commerce Secretary, praised and promised support for the project.[34] The Anson County Chamber of Commerce has also recognized the of the likelihood of growth impacts associated with the Legacy Park; on February 18, 2009, the Chamber met to discuss the "dramatic impact" expected to result from the project.[35] The Union County Board of Commissioners included the Park in their 2025 Comprehensive Plan, stating that the Wingate-Marshville area "is likely to be
17 a major opportunity area once the new Monroe Connector/Bypass is in place."[36] The Board also incorporated the Park into its employment forecasts.[37] The Park is also assumed in the U.S.-74 Revitalization Study projections for industrial growth in the area.[38]

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[29] Seven Portals Study, Attachment 12 ("Management developing this logistics site indicates, however, that the success of their venture will depend very much on the completion of the Monroe Connector/Bypass, a project of the NC Turnpike Authority . . . ."); *see also id.* at 41 ("Considering the estimated values of time shown in Table 3-7, the value per commercial vehicle, generated by time saved using the Monroe Connector/Bypass, can have significant impact on the cost of the future Legacy Park's operations."); *id.* at 40 ("The Monroe Connector/Bypass and Legacy Park both took giant steps forward with the awarding of a $368 million construction contract to contractors on October 28, 2010.").
[30] Union County Partnership for Progress, *Project Legacy Plans*, *available at* http://www.unioncpp.com/legacy/index.html, Attachment 20.
[31] Monroe Connector/Bypass Coordination Meeting, Minutes (Jan. 4, 2007), Attachment 22.
[32] E-mail from Reid Simmons, NC Turnpike Authority, to Radford Thomas, Town of Marshville Town Planner (Oct. 18, 2010), Attachment 23; *see also* Dana Stoogenke, Rocky River RPO, *Marshville Special Study*, at 1 (August 20, 2010) (Rocky River RPO noting that it "spoke to NCTA staff about marking the [Legacy Park] site as a potential interchange, in case the Design-Build team deletes the [Forest Hill] interchange."), Attachment 21.
[33] Union County Partnership for Progress, *Union County Partnership Email Newsletter* (July 2009), *available at* http://www.unioncpp.com/news/July2009newsletter.html, Attachment 24.
[34] Jim Carpenter, *N.C. Commerce Secretary Praises Legacy Park, CEM*, Union County Chamber of Commerce: Jim's Biz Hotline (Jan. 6, 2010), *available at* http://jimsbizhotline.wordpress.com/2010/01/06/n-c-commerce-secretary-praises-legacy-park-cem/, Attachment 25.
[35] Abby Cavenaugh, *New Union Business Park May Have 'Dramatic Impact'*, AnsonRecord.com (Feb. 25, 2009), *available at* http://ansonrecord.com/bookmark/1990185-New-Union-business-park-may-have-%E2%80%98dramatic-impact%E2%80%99#ixzz1WQg9UIrc, Attachment 18.
[36] *Union County, North Carolina 2025 Comprehensive Plan*, at 30-31, Attachment 26.
[37] *Id.* at 70 (noting employment forecasts assume "[l]and has been assembled and rezoned for employment uses in close proximity to Monroe Bypass/Connector interchanges, with a large industrial concentration near the highway's eastern terminus at U.S.-74").
[38] HNTB North Carolina, P.C., *U.S.-74 Corridor Revitalization Study: Framework Plan*, at 72 (June 2012), Attachment 7.

18 Many other sources have highlighted that the Bypass is critical to the success of Legacy Park. Maurice Ewing, head of Union County Partnership for Progress, the county's economic development arm and champion of the project, has acknowledged that the Park in its current form would not proceed without the Bypass,[39] stating that "[w]ithout the bypass, Legacy doesn't work . . . ."[40] and that the Monroe Connector/Bypass "will be critical" to the Park.[41] Marshville Mayor Franklin Reese also emphasized this connection, explaining recently that if the Bypass is built, it is "90 percent certain" that the Park would follow.[42] And Union County planning director Richard Black stated that the Park is contingent on the Bypass. Black concluded that the Park is a likely development so long as the Bypass is built and that it should have been included in Union County's 2010 long-range land-use plan.[43]

19 Further, as noted above, the recently released report from the Governor's Logistics Task Force and the associated Seven Portals Study further underscore the connection between the two projects and the dependency of the Park on the Bypass. The studies note that the Bypass is "key" not only to Legacy Park, but to a number of proposed developments in Union County.[44]

In other words, the Park will not move forward without the Monroe Connector/Bypass, and is thus an indirect effect of the Bypass that must be considered in the environmental analysis.

With regard to the analysis of reasonably foreseeable indirect impacts of a project, NEPA guidance states that:

> [I]f there is total uncertainty about the identity of future land owners or the nature of future land uses, then of course, the agency is not required to engage in speculation or contemplation about their future plans. But, in the ordinary course of business, people do make judgments based upon reasonably foreseeable occurrences. It will often be possible to consider the likely purchasers and the development trends in that area or similar areas in recent years; or the likelihood that the land will be used for an energy project, shopping center, subdivision, farm or factory. The agency has the responsibility to make an informed judgment, and to estimate future impacts on that basis, especially if trends are ascertainable or potential purchasers have made themselves known. The agency cannot ignore these uncertain, but probable, effects of its decisions.[45]

[39] Adam Bell, *Bypass Delays Concern Business Leaders*, SOUTH CHARLOTTE NEWS (April 24, 2011), *available at* http://www.charlotteobserver.com/2011/04/24/2240539/bypass-delays-concern-business.html#ixzz1WQdfm7Ul#storylink=cpy, Attachment 1.
[40] Ken Elkins, *Paving Way for Business in Union County*, CHARLOTTE BUSINESS JOURNAL (Nov. 5, 2012), *available at* http://www.bizjournals.com/charlotte/print-edition/2010/11/05/paving-way-for-business.html, Attachment 17,
[41] Union County Partnership for Progress, *Union County Partnership Email Newsletter* (July 2009), Attachment 24.
[42] Steve Harrison, *New Questions Jeopardize Monroe Connector/Bypass*, CHARLOTTE OBSERVER (Nov. 17, 2012), *available at* http://www.charlotteobserver.com/2012/11/17/3672447/new-questions-raised-about-turnpike.html, Attachment 27.
[43] *Id.*
[44] *Governor's Logistics Task Force, Final Report*, at 81 (2012), Attachment 11 ("Key to any of the sites discussed above and in the Seven Portals Study is the completion of the Monroe By-Pass.").
[45] Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18026 (March 23, 1981).

This guidance makes clear that an analysis of Legacy Park must be included in the Monroe Connector/Bypass EIS. There are a number of highly specific plans for the Park included on the Project website, in the Governor's recently released Logistics Task Force Report, and in other documents obtained by SELC.[46] Furthermore, a task force, including representatives from NCTA and the North Carolina Department of Commerce, has conducted extensive meetings to discuss plans for the Park.[47] The Union County Board of Commissioners has approved a $556 million, 20-year capital improvement project that includes plans to install water and sewer lines to serve the Legacy Park.[48] The Park has also been incorporated into planning for the Centralina Freight-Mobility Plan.[49] In short, NCTA's informed judgment would have to conclude that the Park is a likely result of construction of the Bypass.

20

Plans for the Park have gone so far that potential private partners have begun to "make themselves known,"[50] including the CSX rail corporation. Indeed, state transportation officials have played a central role in encouraging these private partners to come on board and ensure that Legacy move forward. The Executive Director of the NCTA took a special trip to Jacksonville, Florida in an effort to persuade CSX railway to sign on to the project.[51] His role was to be "wildly enthusiastic" when discussing the Monroe Connector/Bypass and its relation to the Legacy project.[52] And NCDOT executive Roberto Canales has been part of the task working to develop the Park's rail facility.[53]

We also note that more than half of the acreage to be incorporated into the Park is owned by the estate of Carroll Edwards, a former Board of Transportation member who resigned in 1997 after it was revealed that he improperly steered NCTA projects to benefit himself or his businesses, or his family.[54] The project has thus not only been planned in great detail, but NCDOT has been fully involved in those plans for many years.

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[46] *See* Union County Partnership for Progress, Project Legacy Maps and Plans, Attachment 28.
[47] E-mail from Maurice D. Ewing, Union County Partnership for Progress, to Barry Moose, Dana Stoogenke, Gretchen Carson, J. Keith Crisco, John Dillard, Michael Trotter, and Parker McCrary (Nov. 2, 2011), Attachment 29; E-mail from Maurice D. Ewing, Union County Partnership for Progress, to Dan Murphy, Cindy Coto, Dale Carroll, Jed McMillan, Jim Van Derzee, Roberto Canales, Vance Bennett, Barry Moose, Dana Stoogenke, J. Keith Crisco, John Dillard, Michael Trotter, Parker McCrary, Richard M. Hood (Dec. 5, 2011), Attachment 30.
[48] Heather J. Smith, *Plan for Utilities Approved*, THE ENQUIRER JOURNAL (Dec. 26, 2011) Attachment 31.
[49] E-mail from Maurice Ewing to Cindy Cotot, Dale Carroll, Gretchen Carson, Jed McMillan, Jim Van Derzee, Roberto Canales, Vance Bennett, Barry Moose, Dana Stoogenke, J. Keith Crisco, John Dillard, Michael Trotter, Parker McCrary, Richard M. Hood (Jan. 31, 2012), Attachment 32.
[50] Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18026 (March 23, 1981).
[51] E-mail from Maurice Ewing, Union County Partnership for Progress, to David Joyner, North Carolina Turnpike Authority (Aug. 19, 2010), Attachment 33.
[52] *Id.*
[53] E-mail from Maurice D. Ewing, Union County Partnership for Progress, to Barry Moose, Dana Stoogenke, Gretchen Carson, J. Keith Crisco, John Dillard, Michael Trotter, and Parker McCrary (Nov. 2, 2011), Attachment 30; Steve Harrison, *New Questions Jeopardize Monroe Connector/Bypass*, CHARLOTTE OBSERVER (Nov. 17, 2012), Attachment 27.
[54] SELC Map, Land Parcel Spreadsheet, Attachment 34; North Carolina Board of Transportation, 2011 Minutes, at 2608-09 (Jan. 6, 2011), Attachment 35; Steve Harrison, *New Questions Jeopardize Monroe Connector/Bypass*, CHARLOTTE OBSERVER (Nov. 17, 2012), Attachment 27.

Despite the clear requirement to disclose Legacy Business Park and associated development as an indirect impact of the Bypass, NCTA failed to perform this analysis in its initial EIS. The only reference to the project was a brief mention in the Qualitative ICE study which failed entirely to mention the connection between the Business Park and the Toll Highway. Indeed, the EIS suggests that the decision to build the Park is entirely independent of the proposed Bypass, despite all the evidence to the contrary set out above.

Most troubling, the failure to present the link between the two projects to the public appears to have been purposeful. In an e-mail obtained by SELC through a public records request, one of Legacy Park's key proponents stated that he would heed NCTA's advice and be "guarded" and "cautious" in discussing the essential relationship between the Business Park and the Bypass.[55] This same individual has continued to warn active parties to be "particularly sensitive to the need to keep this project and [their] current level of activity confidential."[56] These comments suggest that NCTA is once more failing to be open and transparent with the public.[57]

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As NCTA moves forward with its analysis of the Monroe Connector/Bypass, it is essential that reasonably foreseeable development dependent on the highway's construction be fully examined in a future ICE analysis. NCTA has indicated that it intends to discuss indirect effects with RPOs in the area. A discussion with the Rocky River RPO ("RRRPO") should be informative in this regard. Records indicate that the RRRPO has already generated socio-economic forecasts that anticipate Legacy Park's construction, analyzing the Park's regional impacts over the next 30 years.[58] The RRRPO predicts the creation of thousands of jobs in the area as a result of the Park[59] and recognizes that the Park's likely impact includes a rail facility, distributions centers, increased truck traffic, and the build out of other facilities such as office, institutional, commercial, and manufacturing facilities.[60] The RRRPO also recognizes that the associated growth could prompt offsite housing developments and predicts they would occur mostly north and west of Marshville and to some extent in Anson County.[61]

2) Strategic Plan for Towns of Marshville and Wingate

Plans from the Towns of Wingate and Marshville also demonstrate that the Monroe Connector/Bypass will induce substantial development. The two municipalities began strategic planning efforts in 2008 focused towards capitalizing on the growth expected from the Bypass's

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[55] E-mail from Maurice D. Ewing to Steve Dewitt and Christy Shumate (June 7, 2009), Attachment 36.
[56] E-mail from Maurice D. Ewing, Union County Partnership for Progress, to Dan Murphy, Cindy Coto, Dale Carroll, Jed McMillan, Jim Van Derzee, Roberto Canales, Vance Bennett, Barry Moose, Dana Stoogenke, J. Keith Crisco, John Dillard, Michael Trotter, Parker McCrary, Richard M. Hood (Dec. 5, 2011), Attachment 30.
[57] Kevin Seirs, Turnpike Authority, cartoon, CHARLOTTE OBSERVER (November 19, 2012), *available at* http://www.charlotteobserver.com/2012/11/19/3676952/turnpike-authority.html, Attachment 37.
[58] Dana Stoogenke, Rocky River RPO, *Marshville Special Study*, at 1 (August 20, 2010) (key Park proponent's "main concern is the lack of direct access from the Project Legacy site to the Monroe Connector/Bypass") Attachment 21; *see also* Town of Marshville, TAZ Data (Sept. 9, 2010) (projecting expected growth resulting from the Park), Attachment 38.
[59] Town of Marshville, TAZ Data, Attachment 38.
[60] Dana Stoogenke, Rocky River RPO, *Marshville Special Study*, at 1 (August 20, 2010), Attachment 21.
[61] *Id.*

22 cont construction. Published plans state that the Bypass served as a "catalyst" that prompted the municipalities to join with the Union County Partnership for Progress to commission a Strategic Plan for Economic Development.[62] The study is intended to "create a vision and proactive approach towards future development in this transportation corridor which can completely transform the economic landscape of eastern Union County."[63] The Towns recognize that "major highway improvements are coming" and that these will provide "key infrastructure for both manufacturing and retail growth" as well as open land" to develop the towns into a "[s]uburban fringe area."[64]

To create the plan, consultants engaged with the communities to identify several top priorities to plan for and encourage the growth associated with the Bypass. These included developing business corridors and an industrial park, proactively recruiting targeted businesses, encouraging private investment and developments, and expanding water and sewer availability.[65] The study also specifically focuses on utilizing the Bypass interchanges as "gateways to the communities." [66] It sets out plans to recruit an anchor destination to divert traffic off the highway, such as a major water park, skateboard/BMX bike competition arena, equestrian center, or outlet malls, [67] and details several regional examples of such developments.[68]

22 cont The study expressly recognizes that the Bypass "will be the impetus that creates market demand for many other development projects."[69] The study also stresses that the Bypass is key to any of the outlined developments: "[I]f the road does not start on schedule, other development projects will likely be delayed."[70] The study outlines plans to support and develop the Bypass project and to keep the project on schedule in order to take advantage of the growth expected to result from the Bypass.

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22 cont In light of this study, which was published before the original EIS for the Monroe Connector/Bypass was put together, NCTA's finding that the Bypass will not induce growth and development is yet again refuted. NCTA should incorporate the predictions of Marshville and Wingate into its next environmental document.

3) Union County 2025 Comprehensive Plan

23 The Union County Board of Commissioners also recognized the Bypass's potential for growth in its 2025 Comprehensive Plan. The Board states that the Bypass "will open many doors for new commerce in Union County."[71] They state that "The U.S.-74 'Monroe'

[62] GREENFIELD, STRATEGIC PLAN FOR ECONOMIC DEVELOPMENT: TOWN OF MARSHVILLE, TOWN OF WINGATE (Oct. 2008), Attachment 39.
[63] *Id.* at 1.
[64] *Id.* at 9.
[65] *Id.* at 2, 7, 13-15.
[66] *Id.* at 17.
[67] *Id.* at 17.
[68] *Id.* at Appendix 7.
[69] *Id.* at 25.
[70] *Id.*
[71] Union County Board of Commissioners, *Union County, North Carolina 2025 Comprehensive Plan*, at 45 (adopted on October 18, 2010), Attachment 40.

23 cont Connector/Bypass will be an important transportation facility and economic generator in the County for years to come."[72] As such, the Plan details strategy and considerations essential to encouraging and facilitating development resulting from the Bypass.

For example, the Plan recognizes that "coordination with multiple jurisdictions in the County, including the North Carolina Turnpike Authority, the governments of Stallings, Hemby Bridge, Lake Park, Indian Trail, Unionville, Monroe, Wingate, and Marshville, the Partnership for Progress, and other entities" will be necessary to ensure "cohesive development at key nodes in the corridor, appropriate design guidelines for future development, and traffic flow in the corridor."[73] The Plan directs the Board to "work with the municipalities to coordinate growth and development along the Monroe Connector/Bypass corridor to encourage economic development"[74] and recommends that "[p]lanning for development at the connector/bypass's interchanges, particularly in areas of shared planning jurisdiction, will be an important focus for the County."[75]

The Plan outlines specific areas for "new residential and non-residential development in [the Monroe Connector/Bypass] corridor," and includes "Future Land Use" maps showing "where market feasibility for non-residential development is highest (mostly near new interchanges)."[76] It notes that the growth is expected in the primarily rural eastern portion of Union County to such an extent that the rural character is likely to change.[77] Growth is also expected in the "marketable retail lands . . . located along the new Monroe Bypass interchanges in the western portions of the County along NC-84 and NC-16 and in the northeastern portions of the County on NC-218."[78] The Plan also recognizes the likelihood of the Legacy Business Park, discussed above, noting that Wingate-Marshville "is likely to be a major opportunity area once the new Monroe Connector/Bypass is in place."[79]

Again, the Union County 2025 Plan, calls NCTA's conclusions into question, and must be considered and included in any future analysis.

iii) NCTA's Assessments of Impacts from the Bypass are Inconsistent and Contradictory

24 The conclusion that the Monroe Connector/Bypass will make little difference to growth outcomes is based on a flawed analysis performed in the Quantitative Indirect and Cumulative Effects ("ICE") analysis. As we explained in our briefs to the Fourth Circuit, this assertion is

[72] *Id.* at 44-45; *see also id.* at 30 ("Growth is envisioned to continue in the areas surrounding Monroe, driven by the availability of water and sewer service and transportation infrastructure (most notably the new Monroe Connector/Bypass).").
[73] *Id.* at 44-45.
[74] *Id.* at 25.
[75] *Id.* at 3.
[76] *Id.* at 30-35.
[77] *Id.* at 1 ("The eastern parts of Union County are primarily rural in character, but this is expected to change as growth continues westward and is spurred by the development of the Monroe Connector/Bypass.").
[78] *Id.* at 9.
[79] *Id.* at 30.

contradicted by analysis and conclusions made in other documents compiled to review the Toll Highway, including documents that form part of the EIS.

1) Qualitative ICE

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NCTA's Qualitative ICE analysis of the Monroe Connector/ Bypass, unlike its "quantitative" counterpart, actually concludes that the Toll Highway induce growth. The Qualitative study concludes that there is "high potential for new residential growth" in the eastern section of the study area where "build alternatives would improve access and allow for easier and faster commutes to the Charlotte-Mecklenburg urban area" and repeatedly cites the potential for growth in the central and eastern portions "because the project would improve travel time from those areas to Charlotte."[80]

Elsewhere, the Qualitative study expands on these conclusions. In the central section of the study area, the Toll Highway would enhance "access to Charlotte by providing a high-speed freeway in this zone with connection to I-485."[81] The study reports that the City of Monroe was planning "for higher intensity uses along US 601" because of the Toll Highway; land near interchanges and feeder roadways "would be more attractive for commercial and industrial development"; and in Stallings and Indian Trail "it is likely that additional residential development would occur."[82] In the eastern section, "[t]here would be high potential for accelerated growth," "[n]eighborhoods and retail development would likely concentrate in the vicinity of proposed interchanges and along feeder roads," and the Toll Highway "would make this area very attractive for residential development."[83] The qualitative study further concludes: "The project would likely induce an increase in proposed housing density in [the central portion] and pace of development in [the east]."[84]

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2) Community Impact Study

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Similarly, the Community Impact Study in the original EIS states that "local planners believe that the project is vital to the economic well-being of Union County. Furthermore, local planners believe the project would benefit them in their goal to actively seek to attract commercial and industrial growth to boost the local tax base."[85] The Study also explains that "[t]he project will introduce a suburban element into what is generally a rural environment."[86]

3) Traffic and Revenue Study

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NCTA's traffic and revenue study for the proposed toll road, a necessary prerequisite for financing the project, also predicts growth and development. The study explains that "[f]uture economic growth potential is particularly important for the study of any new start-up toll facility

[80] Monroe Connector/Bypass FEIS Appendix G, at 6-7.
[81] *Id.* at 54.
[82] *Id.*
[83] *Id.* at 55.
[84] *Id.* at 72.
[85] Monroe Connector/Bypass, DEIS Community Impact Statement, at 58.
[86] *Id.* at 6.

26 cont

such as the proposed Monroe Connector."[87] In the case of the Toll Highway, the study makes clear that "the population and employment forecasts" used to calculate revenue were "directly related to the growth rates of traffic predicted" by the study's model.[88] The study adds, "[o]f particular importance is that the proposed Monroe Connector is included in the model and *influences the growth* forecasts therein."[89]

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Despite these forecasts of growth attributable to the Toll Highway throughout the NEPA documentation, NCTA's ultimate conclusion in its original EIS was that the Bypass would make little difference to growth outcomes.[90] The document contained no reconciliation of the different conclusions reached in different aspects of the NEPA process. Without explanation, the Quantitative ICE results were adopted as the basis for the ROD, and the Qualitative Study, the Community Impact Study, and the economic revenue forecasts were disregarded. As NCTA has indicated that it will continue to rely on the conclusion of minimal growth reached in the Quantitative ICE, it is imperative that the agency reconcile this conclusion with other statements so that the public can be provided with a clear picture of the impacts attributable to the road.

4) TIFIA Application

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Further, in NCTA's application for federal TIFIA funds for the Bypass, the agency made clear that the project would be a driver of growth. In an attempt to secure federal financing, NCTA told the federal government in its Letter of Interest ("LOI") that construction of the Bypass would "allow the region to continue to be an attractive location for new businesses and additional residents."[91] The LOI put forth the position that by increasing travel-time savings, the Monroe Connector/Bypass would open new areas of eastern Union County, and perhaps even Anson County, for additional development — both residential and commercial/industrial."[92] These areas, the LOI went on to explain:

> are currently predominately rural and have actually lost population in recent years. In fact, Anson County is classified as an economically distressed region and has one of the highest unemployment rates in the state (15.6 percent). Despite recent trends, economic development experts in these areas are hopeful that the Monroe Connector/Bypass will revitalize these areas by providing quick and convenient access to the Charlotte-Mecklenburg urban area.[93]

The LOI touted the benefits of the proposed Legacy Park, explaining that:

> There are plans for new commercial/industrial development near proposed interchange areas in Wingate and Marshville, and the Union County Partnership for Progress is planning for a 5,000-acre business-industrial-educational park – to

[87] Proposed Monroe Connector Preliminary Traffic and Revenue Study Final Report (2006), Attachment 41.
[88] *Id.*
[89] *Id.* (emphasis added).
[90] Monroe Connector/Bypass, FEIS, at 2-45.
[91] North Carolina Turnpike Authority, Letter of Interest, Transportation Infrastructure Finance and Innovation Act, at 10 (March 2010), Attachment 42.
[92] *Id.*
[93] *Id.*

be called Legacy Park – north of U.S. 74 in Wingate. Plans for the Park are preliminary, but the group estimates the project, which would be built over 30 years or more, could employ up to 20,000 workers, and bring $2.3 billion in investment to the area. The Park will include major rail-served industrial sites and a 250-acre intermodal facility adjacent to the existing east west rail line. There are several locations away from the rail-served areas that are proposed for high-tech and educational uses.[94]

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Just as NCTA must be consistent within its EIS, so it must be consistent in all documents it is submitting to the federal government. Either the Monroe Connector/Bypass will induce growth and development or it will not. We note that an NCTA reviewer looking at the application commented that this section discussing induced growth was "a bit counter to other arguements" [sic].[95] We agree. The agency cannot chose one reality when asking for federal money, and then another reality to avoid rigorous federal environmental permitting and mitigation requirements.

iv) New Socio-economic Forecasts Show that Growth Patterns are Changing

1) Dr. Appold's Projections

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Dr. Steve Appold was retained by the Charlotte Regional Alliance For Transportation ("CRAFT"), which includes the Charlotte area's 4 MPOs and 2 RPOs, to develop regional socio-economic projections for the Charlotte Metrolina region for 2015-2045. After reviewing 2010 census data, Dr. Appold projected that future growth trends in the Metrolina region would be increasingly centralized, with the majority of growth occurring in Mecklenburg County and along the surrounding counties' adjacent edges.[96] Dr. Appold projected that the majority of growth in Union County would occur in the central and northwest districts (those abutting Mecklenburg County) rather than the County's more rural South and East districts, such as those in the Monroe Connector/Bypass study area.

NCTA should take these predicted future trends into account when considering the impact of the proposed Toll Highway. If Dr. Appold's projections are correct, then in absence of the Monroe Connector/Bypass we would expect to see minimal growth in Union County, particularly in its rural districts where the Bypass and Legacy Park are currently planned. These new projections directly contradict the demographic and economic forecasts that NCTA relied upon t in the initial Monroe Connector/Bypass EIS.

The "No-Build" scenario in the first Monroe Connector/Bypass FEIS was premised on demographic and economic forecasts for the Charlotte region developed by Dr. Thomas R. Hammer. Dr. Appold's projections call Hammer's estimates into serious question. Hammer's

[94] *Id.*
[95] North Carolina Turnpike Authority, Draft Letter of Interest, Transportation Infrastructure Finance and Innovation Act, at 10 (March 2010), Attachment 43.
[96] E-mail from Stephen Appold to Bjorn Hansen, Scot R. Sibert, Anna Gallup, Ruchi Agarwal, Amy Helms, C. Chorak, Robert Cook, Dana Stoogenke, D. Hooper, D. Ritsema, K. Wolf, Evan Lowry, M. Sandy, Wendy Bell, Bernie Yacobucci, Nadine Bennett, Joe McLelland, R. Black (Oct. 17, 2012), and attached *Metrolina District Densities* PDF, Attachment 44.

29 cont

Union County employment estimates are significantly higher than Appold's for each projection year; in fact, Hammer estimates more than double the jobs in Union County that Appold predicts for 2035, and nearly double Appold's projection for 2030.[97] Though the NCTA has accounted for Hammer's high Union County population estimates based on growth factors such as higher-quality housing stock and schools,[98] these factors do not explain why, in the absence of the Monroe Connector/Bypass, Union County would experience full economic growth including booming job growth, as predicted by NCTA, rather than serving simply as a bedroom community for the Charlotte-Mecklenburg region, as initially predicted by Dr. Appold. NCTA should carefully consider Dr. Appold's analysis in its review of the Monroe Connector/Bypass.

2) 2015-2050 Estimates from Local Planners

Recent socio-economic estimates from local land use planners made in conjunction with Dr. Appolds' forecasts, should also be taken into account by NCTA. For example, the RRRPO, in commenting on Dr. Appold's forecasts stated that "[s]everal infrastructure projects around Anson County will accelerate employment growth in the later years, specifically, the Monroe Bypass, the Wadesboro Bypass and I-73."[99] With regard to the study area specifically, the comments emphasized that "the Monroe Bypass will accelerate employment growth in the rural section of Union County."[100]

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Just like the myriad of other statements and projections noted above, the RRRPO estimates are inconsistent with NCTA's continued insistence that the Monroe Connector/Bypass will have almost no impact on growth outcomes. We hope that NCTA will coordinate with the RRRPO as it reevaluates the Toll Highway We note that during the previous NEPA process, despite two suggestions to discuss socio-economic projections with Ms. Stoogenke at the RRRPO,[101] no such coordination took place.[102]

v) Academic Research Supports the Conclusion that Highways Induce Development.

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Academic literature also supports the likelihood that the Monroe Connector/Bypass will spur growth in Union County. Transportation and planning experts have extensively studied the

[97] Dr. Steve Appold, *Projections Compared* Excel Sheet, at "counties" sheet (Sept. 20, 2012), Attachment 45 (Appold projects 70,176 jobs in Union County in 2035, whereas Hammer projects 141,704; Appold projects 66,730 jobs in Union County in 2030, whereas Hammer projects 128,494).
[98] Baker Engineering, *Union County Growth Factors* Memo, (Sept. 11, 2012) Attachment 15.
[99] Letter from Dana Stoogenke, Rocky River RPO, to Dr. Steven Appold, *RE: 2015-2050 Projections- Metrolina Regional Model* (Sept. 26, 2012), Attachment 46.
[100] *Id.*
[101] Monroe Connector/Bypass FEIS Appendix H, Quantitative ICE Analysis Appendix A, at PDF page 101-03 (notes from Baker Engineering's phone interview with Centralina COG, in which the COG directed Baker Engineering to contact "Dana Stoogenky" at the "Rocky River MPO" to discuss to the RPO's TAZ-level forecasting for the Marshville area), and at PDF page 111-13 (notes from Baker Engineering's phone interview with Town of Marshville Planning Department, in which the department directed Baker Engineering to contact Stoogenke concerning a feasibility study developed by the RRRPO).
[102] The Monroe Connector/Bypass ICE Quantitative Analysis does not mention coordinating with Dana Stoogenke or the RRRPO as a result of these suggestions to do so. *See* Monroe Connector/Bypass FEIS Appendix H, Monroe Connector/Bypass Quantitative ICE Analysis, at 8-10.

31 cont

concept of "induced growth," finding that often adding capacity to an otherwise congested transportation corridor will initially reduce travel times, but that this increase in the service level will attract additional trips that would not have been made without the improvement.[103] As Todd Litman of the Victoria Transport Policy Institute explains, roadway improvements alleviating congestion reduce the generalized "cost" of driving, which encourages more vehicle use and ultimately greater growth in the affected areas.[104] For example, some trips may be diverted from another facility or added by drivers taking longer or more frequent trips or choosing different destinations.[105]

B) NCTA's Modeling of Growth is Arbitrary and Capricious

As illustrated above, NCTA's continued insistence that the Monroe Connector/Bypass will not induce growth sits at odds with a vast body of materials discussing the impacts of the project. NCTA's arrival at this erroneous conclusion is based, in part, on an arbitrary and capricious modeling process.

To analyze growth from the road NCTA prepared a "No Build" scenario and a "Build" scenario. The difference between those two scenarios was thus the growth that was attributed to the road. In order to reach this conclusion either the "No Build" scenario must be incorrect, and include development that would only occur if the Bypass is constructed; the "Build" scenario must be incorrect, and fail to account for growth that will occur if the road is constructed; or both scenarios must be incorrect.

A1-52 32

In its recent draft "Union County Growth Factors" Memo, NCTA suggests that it is the "Build" scenario that is incorrect, stating that "it is possible that population and employment growth in Union County will be higher if the Monroe Connector is built."[106] We have not yet been given sufficient access to NCTA's analysis to review the "Build" scenario in detail, but it seems likely that it has been understated. However, we also believe that the "No Build" scenario continues to overstate growth that will occur in the absence of the Monroe Connector/Bypass.

[103] Todd Litman, *Generated Traffic and Induced Travel: Implications for Transport Planning*, 38-47 INSTITUTE OF TRANSPORTATION ENGINEERS JOURNAL, vol. 71 no. 4, at 2-3 (2001), Attachment 47; *see also* Gilles Duranton & Matthew A. Turner, *The Fundamental Law of Road Congestion: Evidence from US Cities*, AMERICAN ECONOMIC REVIEW, vol. 101(6), at 2616-52 (October 2011), Attachment 48 (finding highway vehicle kilometers traveled increases proportionately to highways and that an increased provision of roads is unlikely to relieve congestion); Robert B. Noland, *Relationships Between Highway Capacity and Induced Vehicle Travel*, Transportation Research Part A 35, at 47-72 (2001), Attachment 49 (finding that approximately 25% of VMT growth is due to added road capacity, supporting the hypothesis that lane mile additions can induce significant additional travel); KENNETH SMALL, URBAN TRANSPORTATION ECONOMICS 113-117 (1992) (arguing that increased highway capacity decreases cost of driving and thereby encourages increased road usage based on latent demand).

[104] Litman, at 2-3, Attachment 47.

[105] *See, e.g.*, DOUGLASS B. LEE, JR., INDUCED DEMAND AND ELASTICITY, at 17 (2002) (prepared for US DOT/FHWA), Attachment 50.

[106] *Union County Growth Factors* Memo, Attachment 15.

i) NCTA's continued reliance on the Metrolina Travel Demand Model as a "No Build" baseline is arbitrary and capricious

As explained by the United States Court of Appeals for the Fourth Circuit, the "No Build" scenario in the Monroe EIS acted as the "baseline" from which growth was calculated and was a "critical aspect of the NEPA process." *N.C. Wildlife Fed'n*, 677 F.3d at 603. In its opinion, the Court made clear that "'[w]ithout [accurate baseline] data, an agency cannot carefully consider information about significant environment impacts . . . resulting in an arbitrary and capricious decision.'" *Id.* (quoting *N. Plains Res. Council*, 668 F.3d at 1085). Indeed, the accuracy of the no-build baseline is so important that, as recognized in the Fourth Circuit's opinion, "courts not infrequently find NEPA violations when an agency miscalculates the "no-build" baseline or when the baseline assumes the existence of a proposed project. *See id.* (citing *Friends of Yosemite Valley v. Kempthorne*, 520 F.3d 1024, 1037-38 (9th Cir. 2008)).

As the Fourth Circuit made clear, the "No-Build" baseline presented in the invalidated Monroe Connector/Bypass EIS did not provide an accurate reflection of the future study area without the Toll Highway. The Court noted that "the Agencies used MUMPO's projections as the 'no-build' baseline," and "part of MUMPO's data actually *assumed construction of the Monroe Connector*." *Id.* at 599-600 (emphasis in original). "By using MUMPO's data, therefore, the Agencies incorporated 'build' assumptions into the 'no-build' baseline." *Id.* at 600.

There can be no doubt about the basis for, and the scope of, the Court's ruling on this issue, especially in light of the Fourth Circuit subsequent opinion, *Friends of Back Bay v. U.S. Army Corps of Engineers*, 681 F.3d 581 (4th Cir. 2012). In that case, the Court also emphasized the importance of accurate baseline data to the NEPA process. As an example, it cited the flawed Monroe analysis, explaining that the transportation agencies "erroneously adopted the assumption that the road would be built in estimating the consequences resulting from no action being taken." *Id.* at 588. The Court labeled the action taken by the transportation agencies in analyzing the Monroe Connector/Bypass an "obvious and fundamental blunder," and explained that the Court had "had no difficulty remanding the matter for reconsideration." *Id.*

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As such, the Court made clear that the agencies must create an accurate "No-Build" baseline, and that MUMPO's socioeconomic data, which assumes construction of the Monroe Connector/Bypass, cannot form the basis of such a baseline. Despite this clear mandate, rather than set out to create a new, accurate baseline, NCTA has focused on attempting to explain why the Court of Appeals was in fact mistaken, and why continued reliance on MUMPO's Metrolina Regional Travel Demand model ("MRM") as the baseline is appropriate.

In its new attempt to explain away this error, NCTA discusses three aspects of the MRM model: the "top-down" analysis, the "bottom-up" analysis, and the "expert panel." NCTA contends that each of these three elements illustrate that continued reliance on the MRM as the "no build" baseline is appropriate. Below we detail the flaws in each of these processes that have not been addressed by NCTA and explain why their new arguments and explanations have just as little merit as the initial arguments used during litigation.

1) Top-Down

NCTA continues to represent that the Monroe Connector/Bypass was not assumed in the top-down analysis. This is incorrect. As we explained in our briefs to the Fourth Circuit, the top-down stage *did* assume that a project like the Monroe Connector/Bypass would be constructed.

34 The top-down model, which takes a large scale overview of future growth projections, was based on a number of core assumptions. One of those assumptions was that there would be sufficient infrastructure available to accommodate any future growth. With regard to transportation, the model equated distance to travel time at all points in the future. In other words, the model assumed that in the future there would be no increase in the time it would take to get from point A to point B as a result of delays on area roadways, even if there were significantly more people living in the region.

In a situation such as the one predicted by this model, where there is an increasing population and thus increasing traffic, the only way that travel time can remain constant between two geographical points is if additional transportation improvements — such as the Monroe Connector/Bypass — are implemented. Otherwise, roads would eventually reach capacity and travel time would slow between two geographic points. The top-down model was thus premised on the construction of transportation improvements such as the Toll Highway.

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35 In arguments to the Fourth Circuit, NCTA's counsel contended that because the top-down analysis does not include a transportation network, the Toll Highway cannot have been assumed in the results. This explanation entirely missed the point. As we made clear to the court, it is *precisely because* the top-down process does not include a transportation network, and instead uses proximity distances as a proxy for travel time, that the Toll Highway is part and parcel of the process.

Our concerns regarding top-down modeling were recently confirmed at an October 16, 2012 meeting of CRAFT when Dr. Steve Appold presented the next iteration of the top-down socio-economic forecasts for the Metrolina region. Dr. Appold confirmed that the explanation we provided to the Fourth Circuit is accurate: Top-down forecasts assume that there is sufficient infrastructure in place to keep up with expanding population, and thus inherently assume projects like the Monroe Connector/Bypass.[107]

Dr. Appold's presentation and the accompanying comments from area transportation planners also served to demonstrate that the top-down forecasts are not as "independent" from local planning decisions as NCTA has suggested. While the process is originally based on census data and large scale societal projections, the ultimate top-down numbers are reviewed and modified by local planners based on their assumptions about what growth they hope to see in the future. Documents obtained by SELC concerning the development of the 2040 Metrolina Regional Socio-economic projections confirm this concern.

[107] Charlotte Regional Alliance For Transportation Meeting, Agenda (Oct. 16. 2012), Attachment 51 (Meeting was attended by SELC attorney, Kym Hunter).

The Charlotte region's area planners have engaged Dr. Appold to develop these projections using a top-down model. In the process of developing these projections, Dr. Appold has presented the local planners with at least two rounds of preliminary projections, explaining that they were "meant as a basis for discussion,"[108] with the specific intent that the local planners give feedback and suggestions for Appold to incorporate into the next round of projections.[109]

Though some calls for adjustments were based on legitimate qualms concerning the available data,[110] many of the suggested changes dealt with Dr. Appold's perceived failure to incorporate the growth that planners anticipate may result from local infrastructure projects, such as the Monroe Connector/Bypass. For example, the Rocky River RPO claimed that the 2040 growth projections should show much higher growth and employments rates for the applicable area based on proximity to several specific local infrastructure projects, expressly noting the Monroe Connector/Bypass as an example, as well as other "major projects" that could stimulate growth in the area.[111] Similarly, GUAMPO and the Lake Norman RPO questioned Dr. Appold's interpretation of future projects and historical trends, and advocated different interpretations that would project much higher population growth and employment rates for the counties in the Gaston Urban Area and Lake Norman RPO area.[112] Additionally, each set of comments from the planners in areas surrounding Mecklenburg County expressed serious concerns over Appold's projection of concentrated growth in Mecklenburg County and slowing growth in the surrounding communities.

Following these comments, Dr. Appold "modified his methodology to ensure that most counties grow in population and employment at a[t] least its long-term relationship to the regional growth rate."[113] But he cautioned that he did not "feel fully comfortable with this outcome (particularly in regard to individual districts)," noting that "[t]he pattern over the last decades has been increasing concentration in Mecklenburg County and there is no sign of that trend reversing." He also noted that:

[108] E-mail from Stephen Appold to Bjorn Hansen (Oct. 1, 2012), Attachment 52.

[109] E-mail from Anna Gallup to Steve Appold (October 16, 2012), Attachment 53; e-mail from Steve Appold to Anna Gallup, Ruchi Agarwal, Amy Helms, Bjorn Hansen; C. Chorak, Robert Cook, Dana Stoogenke, D. Hooper, D. Ritsema, K. Wolf, Evan Lowry, M. Sandy, Phil Conrad, Scot R. Sibert, Wendy Bell, Bernie Yacobucci, Nadine Bennett, Joe McLelland, R. Black, and Hank Graham (Sept. 20, 2012), Attachment 54 ("I want to stress that the projections presented last Friday were preliminary and that your feedback and suggestions are most appreciated. They will be taken into account is the next draft round.").

[110] For example, Dr. Appold noted that the initial draft projections were based on incomplete data, specifically noting that he did not have validated employment estimates for the entire region for 2010. *See* e-mail from Steve Appold to Anna Gallup, Ruchi Agarwal, Amy Helms, Bjorn Hansen; C. Chorak, Robert Cook, Dana Stoogenke, D. Hooper, D. Ritsema, K. Wolf, Evan Lowry, M. Sandy, Phil Conrad, Scot R. Sibert, Wendy Bell, Bernie Yacobucci, Nadine Bennett, Joe McLelland, R. Black, and Hank Graham (Oct. 1, 2012), Attachment 55.

[111] Letter from Dana Stoogenke, Rocky River RPO, to Dr. Steven Appold (Sept. 26, 2012), Attachment 46 (conveying the RRRPO's comments on the 2040 draft projections).

[112] Letter from Bernie Yacobucci, Gaston Urban Area MPO, to Dr. Steve Appold (Sept. 28, 2012), Attachment 56 (conveying GUAMPO's comments on the draft 2040 projections); letter from Bjorn E. Hansen to Dr. Steve Appold (Sept. 28, 2012), Attachment 57 (conveying the Lake Norman RPO's comments on the draft 2040 projections).

[113] E-mail form Steve Appold to Anna Gallup, Ruchi Agarwal, Amy Helms, Bjorn Hansen, C. Chorak, Robert Cook, Dana Stoogenke, D. Hooper, D. Ritsema, K. Wolf, Evan Lowry, M. Sandy, Phil Conrad, Scot R. Sibert, Wendy Bell, Bernie Yacobucci, Nadine Bennett, Joe McLelland, R. Black, and Hank Graham (Oct. 15, 2012), Attachment 58.

> Over the last two decades, population and employment have been concentrating in Mecklenburg. District-level density gradients for both population and employment have become steeper from 1990 to 2000 to 2010. If anything, the region is becoming more mono-centric than it was in the past.[114]

And even after Dr. Appold incorporated the planners' initial comments and revised his original projections, many of the planners have continued to voice concerns and sought to further influence the projections.[115]

36 Thus, contrary to NCTA's contentions, even at the top-down stage, local infrastructure, such as the Monroe Connector/Bypass, and local priorities, such as projections of high growth, are factored into future forecasts both implicitly and explicitly. In recent presentations NCTA has made clear that it does not intend to address the use of top-down data that assumes construction of the Monroe Connector/Bypass for its "No Build" scenario. The EIS will thus remain based on an arbitrary and capricious assumption.

2) Bottom-Up

NCTA denied the inclusion of the Monroe Connector/Bypass in the bottom-up analysis throughout the NEPA process despite multiple inquiries from both SELC and resource agencies. After SELC filed suit and documents illustrating that the project had, in fact, been included in the analysis were brought to light, the agency was forced to change its position. During litigation NCTA adopted the position that while the Monroe Connector/Bypass was included in the bottom-up data, its inclusion was insignificant. The Court rejected this assertion. NCTA persists in yet another variation of this same argument.

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38 With its initial attempts to demonstrate the insignificance of the inclusion left in tatters by the Fourth Circuit, NCTA has seized on a new explanation. The agency now asserts that in the bottom-up analysis, the proposed Bypass only reduces travel time to employment in the region by an average of 18 seconds and thus has little influence on overall growth patterns.[116] Further, NCTA's materials state that current average Union County commuting times are just 29 minutes, only two or three minutes higher than commuting times elsewhere in the Charlotte region.[117]

These statements are at odds with other NCTA statements about the bypass which assert that it will save drivers between 30-50 minutes.[118] Thus, either (1) NCTA is reconsidering the projected travel time savings from the Toll Highway, or (2) the model has severe inaccuracies

[114] *Id.*
[115] E-mail from Anna Gallup to Steve Appold (October 16, 2012), Attachment 53 ("Hank [Graham, of GUAMPO,] still has concerns with Gaston County projections . . . and Phil [Conrad, of CRMPO,] has concerns that this round of projections showed his inner ring county (Cabarrus) with slowed growth and his outer ring county (Rowan) with increased growth . . . .").
[116] Baker Engineering, Presentation before the Monroe Connector Bypass Agencies, *Monroe Connector/Bypass Agency Update: Indirect and Cumulative Analysis Review*, at slide 16 (October 17, 2012), Attachment 59.
[117] *Id.*
[118] Monroe Connector/Bypass DEIS, Community Impact Assessment for the Monroe Connector/Bypass (Feb. 2009), at 62.

38 cont with regard to predictions of travel-time and the associated impact on population distribution. Such inaccuracies are highly significant as NCTA made clear throughout the NEPA process that travel time is of paramount importance in predicting where people live.

For example, in its Qualitative ICE study, NCTA explained that travel time to major employment centers is one of the most important factors influencing induced development.[119] NCTA further emphasized the importance of Travel Time to Employment in its Quantitative ICE study, stating that "improving accessibility (as measured by travel time) to I-485 and the major employment centers in Mecklenburg County would be the main reason for changes in development patterns" attributable to the Toll Highway.[120]

Indeed, NCTA's insistence on the importance of travel time was recognized by the United States Court of Appeals, which pointed out in its opinion that the agencies had stated throughout the NEPA documents that "decreased travel time to employment often spurs development," and that, accordingly, "the administrative record does not demonstrate the irrelevance of travel time to employment." *N.C. Wildlife Fed'n*, 677 F.3d at 605.

In sum, if we accept NCTA's new reasoning, then either:

a) The modeling process used by NCTA must be fundamentally flawed; or
b) NCTA has dramatically and repeatedly overstated benefits of the proposed Toll Highway.

39 Consequently, it is essential that NCTA restart its ICE analysis. The new study must include a "No-Build" scenario that does not include the Monroe Connector/Bypass in either the top-down or the bottom-up analysis. Further, in keeping with NCTA's conclusion that the travel time metric is an indispensable part of forecasting future growth patterns, the model used must accurately account for the importance of travel time to employment in all scenarios.

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3) "Expert Panel"

In addition to minimizing the Toll Highway's inclusion in the modeling process, NCTA has attempted to legitimize its reliance on MUMPO's socio-economic data for the "No-Build" scenario by repeated reference to interviews that were conducted with local planners. For example, in an October 2012 meeting with federal and state resource agencies, an NCTA representative was asked whether the "Expert Panel" assumed construction of the Monroe Connector/Bypass. The NCTA representative responded:

> No. The project team verified with MUMPO and local planners that the land use plans adopted at the time did not include the Monroe Connector/Bypass, and these plans served as the basis for their assumptions.[121]

[119] Monroe Connector/Bypass FEIS Appendix G, at 2, 6-7, 55, 72.
[120] Monroe Connector/Bypass FEIS Appendix H, at 15 (emphasis added).
[121] Agency Coordination Meeting Minutes, at 3 (October 17, 2012), Attachment 60.

This statement completely ignores the finding by the United States Court of Appeals that this verification process was, in fact, "patently inadequate." *N.C. Wildlife Fed'n*, 677 F.3d at 605 n.4. The failures of the interview process were detailed in our briefs to the Court and is recited again for your convenience below.

a) First Round of Interviews

In its initial investigation into the indirect effects of the proposed Bypass, NCTA consultants interviewed a number of local planners. In these interviews the local planners were asked whether the Bypass would induce growth in their respective areas. Not surprisingly, many planners stated that the proposed highway would indeed induce development. This sentiment was shared by planners from outlying locations such as Marshville,[122] Wingate[123] and Unionville[124] and also planners closer to Charlotte such as those in Indian Trail[125] and Stallings.[126]

Specifically, local planners noted that "[b]uilding the [Toll Highway] would help eliminate a barrier to commercial/residential development,"[127] would make a community "attractive as a bedroom community to Charlotte,"[128]and would cause "development pressure if constructed on new location."[129]

Following these interviews, NCTA published its Qualitative ICE study which included the common sense conclusion that a new Toll Highway would likely result in more residential and commercial development in the central and eastern portions of the study area, and in Union County in general, due to the reduced travel time to Charlotte.[130] The study stated that the shorter travel time, along with inexpensive land and water and sewer service, would make the area a prime target for residential development.[131] Improved access to Charlotte and I-485 could encourage new industrial development.[132] The study concluded that this accelerated growth would result in impacts to farmland, water resources, and terrestrial habitat.[133]

The first round of interviews thus concluded that the Monroe Connector/Bypass would induce additional growth in the study area. This fact has never been addressed.

[122] Monroe Connector/Bypass FEIS Appendix G, at 115-16.
[123] *Id.* at 119.
[124] *Id.* at 125.
[125] *Id.* at 109.
[126] *Id.* at 146-47.
[127] *Id.* at 116.
[128] *Id.* at 119.
[129] *Id.* at 125.
[130] *Id.* at 6.
[131] *Id.* at 53-55.
[132] *Id.* at 55.
[133] *Id.*

b) Second Round of Interviews

41 The second round of interviews with local planners conducted in 2009 focused specifically on the appropriateness of reliance on the MUMPO's socio-economic data. NCTA's consultants asked local planners if they believed it would be appropriate to use these MUMPO forecasts to illustrate a future "No-Build" scenario. In the course of this investigation the vast majority of planners were unable to confirm whether or not the current socio-economic forecasts were appropriate for a "No-Build" scenario.[134]

Despite the failure of the local planners to confirm the appropriateness of using the socio-economic data to generate a "No-Build" scenario, NCTA went ahead and published a Quantitative ICE analysis based on this data.[135] Again, this shortcoming has never been addressed.

c) Third Round of Interviews

After questions were raised about the legitimacy of the MRM as a "No Build" scenario, NCTA conducted a third round of interviews to "reconfirm the assumption that the Monroe Connector/Bypass was NOT included in socio-economic projections."[136]

42 NCTA's consultant, Baker Engineering, once more made contact with local area planners. This contact took the form of a brief and biased email questionnaire which asked the planners to endorse the use of the MUMPO's socio-economic data. The questionnaire did not describe the underlying concern about the inclusion of the Toll Highway in the "No-Build" analysis, but rather suggested to planners that they agree with the Turnpike Authority's assumption that the MUMPO's socio-economic forecasts *could* be used for a "No-Build" scenario.

Each e-mail asked: "Based on your understanding of the socio-economic forecasting process that occurred from 2001-2004, would you agree with our assumption that these forecasts represent a future scenario without the Monroe Connector."[137] The consultants assured the planners — many of whom had no personal knowledge of the creation of the TAZ data and many of whom were not in their current positions when the data was produced — that all other planners had agreed with the assumption.[138]

43 While the NCTA reported favorable results from this round of "interviews," the results were in reality not conclusive. Despite the skewed questions, several planners could not confirm that the socio-economic forecasts had been applied in a reasonable manner,[139] and others who

[134] *See, e.g.*, Monroe Connector/Bypass FEIS Appendix H, at 103, 110, 113, 121, 128, 131.
[135] Monroe Connector/Bypass FEIS Appendix H.
[136] Brief for Defendants-Appellees at 21, *N.C. Wildlife Fed'n*, 677 F.3d 596 (4th Cir. 2012), Attachment 61.
[137] Michael Baker Engineering, *Memo re: Confirmation of No-Build Assumptions for Monroe Connector/Bypass*, at 5-6 (July 26, 2010), Attachment 62.
[138] *Id.* at 5-36.
[139] *Id.* at 1-2.

43 cont replied in the affirmative were the very same planners who earlier had stated they were unable to confirm such assumptions.[140]

44 In sum, despite to NCTA's continued assertions to the contrary, the interviews conducted with local planners do not confirm the appropriateness of using MUMPO's socio-economic projections to generate a "No-Build" scenario. Rather, as conclusively found by the Court, the process was "patently inadequate." *N.C. Wildlife Fed'n*, 677 F.3d at 605 n.4. Moving forward, it is imperative the NCTA engage with local planners to present clear and honest "Build" and "No-Build" scenarios. Where local planners do not have sufficient knowledge or expertise to identify the appropriate use of socio-economic data, this fact should be indicated. Similarly, future interviews must provide local planners with sufficient information about the intended use for the data so that they are able to accurately determine the appropriateness of that use. Further, NCTA must insure that all appropriate local planners are contacted. As noted above, the failure to coordinate with the RRRPO during the previous NEPA process led to significant inadequacies in the analysis.

ii) NCTA's "Build" scenario understates growth attributable to the road

As noted above, in the recent Union County Growth Memo, NCTA suggests that the "Build" scenario may under-estimate the level of growth that can be attributed to the Bypass.[141] We agree. As detailed above, significant growth and development is anticipated to occur if the Monroe Connector/Bypass is constructed. However, little of this growth is accounted for the in the "Build" scenario. In addition to revising the "No Build" scenario to ensure that it accurately reflects a future without the Monroe Connector/Bypass, NCTA must ensure that the "Build scenario" accounts for all the reasonably foreseeable future growth that will result from the Bypass.

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45 NCTA has indicated that it does not intend to address the "Build" scenario, or even explain what methodologies were used to create it and how they factored in the road. Instead, the agency has vaguely stated that "various accepted techniques" were used to create the "Build" scenario and that there is no intention of going back to make sure that the project was properly factored in. Given the vast gulf between NCTA's prediction of impacts from the road and all other conclusions about the impacts from the road, this assurance is not sufficient. NCTA must clearly explain how the "Build" scenario is calculated, and how it takes into account all predicted future development that can be attributed to the Toll Highway.

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C) <u>NCTA Must Revisit its Analysis of Cumulative Impacts</u>

In addition to fully analyzing the indirect impacts of a proposed project, NEPA mandates that agencies analyze the cumulative impacts of "past, present, and reasonably foreseeable future actions regardless of what agency . . . or person undertakes such other actions." 40 C.F.R. § 1508.25(a)(2). Cumulative impacts may result from "individually minor but collectively significant actions taking place over a period of time." *Id.* § 1508.7. In determining whether a project will have a "significant" impact on the environment, an agency must consider "[w]hether

[140] *Compare id. with* Monroe Connector/Bypass FEIS Appendix H, at 110, 125, 128.
[141] *Union County Growth Factors* Memo, at 17, Attachment 15.

the action is related to other actions with individually insignificant but cumulatively significant impacts." *Id.* § 1508.27(b)(7). NCTA's initial analysis of cumulative impacts was incomplete and must be supplemented.

i) NCTA must Consider the Cumulative Impacts from Legacy Business Park

46 As discussed above, the proposed Legacy Park is a reasonably foreseeable future development, and the EIS must consider the cumulative impacts of the Bypass and the business park in combination. Such an analysis would be required even were the Park not dependent on the Bypass. NEPA regulations require that agencies analyze the cumulative impacts of "past, present, and reasonably foreseeable future actions regardless of what agency . . . or person undertakes such other actions."[142] In determining whether a project will have a "significant" impact on the environment, an agency must consider "[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts."[143] The Legacy Park development will necessarily have such an impact.

ii) NCTA must consider the Cumulative Impacts from the Proposed 601 Connector

47 NCTA must also consider the cumulative impact of the Monroe Connector/Bypass and the proposed 601 Connector — a proposed new location four-lane divided road that would connect the Monroe Connector/Bypass and US 601 South.

The 601 Connector was first proposed and considered by the City of Monroe's Transportation Committee in early 2008.[144] In December 2010, after the publication of the ROD for the Monroe Connector/Bypass, the City of Monroe hired Davenport Transportation Consulting to "develop and evaluate an alignment for the proposed 601 South Connector Project." [145] Davenport was instructed to coordinate with NCTA regarding interchange feasibility, develop location alternatives, review those alternatives with the City of Monroe and MUMPO, and develop final plans for the selected alignment.[146]

Davenport developed four possible locations or "alignments" were proposed by the consulting firm. The City's Transportation Committee determined that Alignment 2 was best. Details for each alignment regarding total length, distance required to travel from the Monroe Connector/Bypass to 601, railroad crossings, floodplain crossings, property impacts, and cost are available in a chart in Attachment 65.[147] Alignment 2 was chosen as the preferred alignment.

[142] 40 C.F.R. § 1508.25(a)(2).
[143] *Id.* § 1508.27(b)(7).
[144] James N. Lloyd, *City of Monroe Staff Report: 601 South Connector Project* Memo to Transportation Committee (March 30, 2011), at 1, Attachment 63.
[145] Contract between the City of Monroe and John Davenport Engineering, Inc., DBA Davenport Transportation Consulting, at 1 (Dec. 9, 2010), Attachment 64.
[146] *Id.* at 11.
[147] 601 Connector Packet, at PDF page 5, Attachment 65.

Several observers have noted that the proposed road would intersect land held by a company called "Monroe Connector/Bypass-Highway 601 LLC" owned by future U.S. Congressman Robert Pittenger.[148] Documents produced by the City of Monroe illustrate exactly where Congressman Pittenger's land is situated in relationship to the proposed road.[149]

In November 2010, City of Monroe staff recommended to the Transportation Committee that the project should be considered for inclusion in the Comprehensive Transportation Plan (CTP) that was currently being developed by MUMPO.[150] The CTP is a multi-modal plan that identifies the future transportation system needs and includes highways, public transportation, rail, and bicycle facilities needed to serve the anticipated travel demand.[151]

Ultimately, after a number of public meetings and other discussions, the Monroe City Council's Transportation Committee tabled the project.[152] The City of Monroe's engineering director sent a letter to the secretary of MUMPO on June 13, 2011 regarding cost share for the project.[153] In the letter, the City states that the unanimous vote at the April city council meeting to "table the project" as "based in part on comments made at the [March 24] workshop.[154]

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While we understand that the 601 Connector project may not proceed immediately, we ask NCTA to determine if there are still any plans for its construction. Statements from the Monroe City Council are that the project is "on hold," suggesting that it has not been abandoned but is planned for construction in the near future. If the intention is still to pursue the project, then NCTA must account for the cumulative impact of the Connector in its analysis of the Monroe Toll Road. We note that an early scoping exercise for the Monroe Connector/Bypass NEPA process included the possibility of pursuing a combined NEPA process for the 601 Connector, the Monroe Bypass and the Monroe Connector.[155] The two projects are intimately connected and should not be pursued on a piece-meal basis.

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III. NCTA'S ALTERNATIVES ANALYSIS IS ARBITRARY AND CAPRICIOUS

NCTA's impacts analysis was not the only part of NCTA's analysis found to be flawed by the United States Court of Appeals. Consistent with well-settled NEPA jurisprudence, the Court made clear that "[a]gencies must [r]igorously explore and objectively evaluate all reasonable alternatives." *N.C. Wildlife Federation*, 677 F.3d at 602 (citing 40 C.F.R. § 1502.14(a)). However, in recent presentations and other statements, NCTA has made clear that it does not intend to revisit its alternatives analysis, or the traffic forecasts upon which that analysis is based.

[148] *See id.* at PDF pages 32, 40-41, 49.
[149] *601 Connector Properties LLC* map (March 29, 2011), Attachment 66.
[150] James N. Lloyd, City of Monroe Staff Report: 601 South Connector Project (Nov. 22, 2012), Attachment 63.
[151] *See* Mecklenburg-Union Metropolitan Planning Organization, *Comprehensive Transportation Plan, available at* http://www.mumpo.org/plans-programs/comprehensive-transportation-plan.
[152] E-mail from Wayne Herron, City Manager for the City of Monroe, to Monroe City Council (April 8, 2011), Attachment 67.
[153] Letter from James N. Lloyd to Robert W. Cook (June 13, 2011), Attachment 68.
[154] *Id.*
[155] Monroe Connector, *Project Milestone Estimated Schedules* (August 2, 2005), Attachment 69.

A) NCTA's Statement of Purpose and Need should be re-written

The scope of the agency's alternatives analysis depends on the underlying "purpose and need" specified by the agency for the proposed action.[156] This is important, as "[o]nly alternatives that accomplish the purposes of the proposed action are considered reasonable, and only reasonable alternatives require detailed study. So how the agency defines the purpose of the proposed action sets the contours for its exploration of available alternatives." *Webster v. United States Dep't of Agric.*, 685 F.3d 411, 422 (4th Cir. 2012) (internal citation omitted).

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In its recent presentation to federal and state resource agencies, NCTA has indicated a willingness to revisit the purpose and need for the Monroe Connector/Bypass. We urge the agency to take this step. As explained below, not only is the current statement extremely unclear, but recent developments call its very rationale into question. Once NCTA has clarified its purpose and need a full analysis of all reasonable alternatives can begin.

i) The Current Statement of Purpose and Need is Unclear

As articulated in NCTA's original EIS, the stated purposes of the Monroe Connector/Bypass are:

1) To construct a facility that allows for safe, reliable, high-speed regional travel in the U.S. 74 Corridor between I-485 in Mecklenburg County and the Town of Marshville in Union County, in a manner consistent with the North Carolina Strategic Highway Corridors Vision Plan for U.S. 74 and the designation of U.S. 74 on the North Carolina Intrastate System.

2) Improve mobility in the U.S. 74 corridor within the project study area, while maintaining access to properties along existing U.S. 74.[157]

48 cont

Over the past year through our discussions with local community members and others, it has become clear that this statement of "purpose" is confusing, and has created a false impression. Many residents of Union County, including local elected officials, believe that the purpose of the Monroe Connector/Bypass is to decrease congestion and improve mobility on existing U.S. 74. It is understandable that local community members could have reached this false conclusion. The stated purpose of improving "mobility in the U.S. 74 corridor within the project study area" gives the impression that the Toll Highway will improve U.S. 74 itself, rather than just provide a parallel (tolled) road in the corridor that will improve mobility.

For example, Mayor Lynda Paxton of Stallings, one of the communities that will be impacted by the proposed bypass, recently wrote on her website: "The purpose of the Monroe Connector/Bypass is widely misunderstood by residents who mistakenly assumed the toll road

[156] 40 C.F.R. § 1502.13.
[157] *See* Final Statement of Purpose and Need (Feb. 2008).

would improve congestion on Highway 74."[158] Mayor Paxton expanded on this concern in Letters to the Editor of two local papers:

> Many of us bought into the toll road on an expectation that it would bring significant relief for commuters traveling into Charlotte on U.S. 74. We believed the assertion that improving U.S. 74 would wipe out 59 percent of the county's economic base. We reluctantly signed on and worked diligently to minimize the adverse impacts to our rural and town communities, thinking the road was inevitable. But how many Union County residents and regional transportation planners would support construction of the Monroe Connector/Bypass if they knew that the road is expected to provide only minimal and short term relief for congestion on U.S. 74 and that there are viable and much less costly alternatives that would preserve the commercial tax base?[159]

SELC attorneys have been confronted with this misapprehension time and again by members of the local community. In community meetings we have attended in Monroe, Stallings and other Union County locations, members of the community have repeatedly insisted that the purpose of the highway is to improve U.S. 74. This sentiment has been echoed by local elected officials who have been adamant that the key purpose of the Monroe Connector/Bypass, and the reason for their support of the project is because it will improve congestion on U.S. 74.[160]

By contrast, NCTA has acknowledged in recent meetings that the proposed toll highway will not, in fact, improve congestion on U.S. 74. During a meeting of the U.S. 74 Corridor Revitalization stakeholders, NCTA representatives made clear that the Bypass was not planned with the idea to improve or address congestion issues on U.S. 74.[161] That is not a stated purpose of the Bypass, nor is it an anticipated result of the Bypass; instead, the purpose is to create a high speed corridor in the region.[162] This fact is not new. Traffic data in the EIS indicated that congestion on existing U.S. 74 would not be much improved with construction of the Bypass.[163]

In fact, NCTA has stated that the agency "would not be in favor of changes to U.S.-74 that would have a competing interest with the bypass,"[164] as such improvements would have a negative impact on toll revenue. In this same meeting, an NCTA representative stated that he does not expect dramatic improvements to the Level of Service on U.S. 74 as a result of the

[158] Mayor Lynda Paxton Website, Transportation/Bypass, *available at* http://www.mayorpaxton.com/Transportation_Bypass.php, Attachment 70.
[159] Union County Weekly, Letter to the Editor, November 9, 2012, http://www.unioncountyweekly.com/news/2012/11/union-county-letters-to-the-editor-nov-9/, Attachment 71.
[160] *See, e.g.*, Stallings Town Council Meeting (Sept. 24, 1012), *minutes available at* http://stallingsnc.granicus.com/DocumentViewer.php?file=stallingsnc_391df462d837e8bd3bd5ca9e749afdae.pdf&view=1, Attachment 72; Charlotte Regional Alliance For Transportation Meeting, Agenda (Nov. 1, 2012), Attachment 73; MonroeBypassFacts Community Meeting, Union County Agricultural Center (Oct. 30, 2012).
[161] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 3 (Jan. 18, 2011), Attachment 74.
[162] *Id.*
[163] *See, e.g.*, Monroe Connector/Bypass Draft EIS, Table 2-7.
[164] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 4 (Jan. 18, 2011), Attachment 74.

Bypass, recognizing that U.S. 74 would still be plagued with heavy traffic even if the Bypass were constructed.[165]

Moreover, the EIS itself presents a confusing and contradictory picture of how existing U.S. 74 will be impacted by the construction of the Bypass. For example, the Community Impact Study states that the project is expected to "reduce traffic volumes on existing U.S. 74 and the local street network."[166] Further, in addressing the concerns of low income communities, the report goes on to explain that the "result of the project would be reduced traffic on existing alternate non-toll routes, including U.S. 74. Completing the project would benefit all motorists, including low-income motorists who may choose not to use the toll facility or may tend to use it less frequently."[167]

Outside of the EIS, NCTA has also been inconsistent about the purpose of the Toll Highway, or its impact on existing U.S. 74. For example, in its 2010 Letter of Interest for a Federal TIFIA loan, the agency stated that "The proposed [Monroe Connector/Bypass] would give U.S. 74 back to the locals, allowing for local trips and improving access to businesses along the corridor."[168]

48 cont Moving forward, NCTA must articulate and deliver a clear statement of purpose and need to the public, and be clear about the impact of constructing the road to existing U.S. 74.

i) The need for the road should be re-considered in light of recent modeling determinations

NCTA recently engaged Baker Engineer to re-explain the use of MUMPO's socio-economic data in the original "No-Build" scenario.[169] If we take this research and analysis at face value its conclusions cast serious doubt on whether the Bypass can meet its stated purpose and on whether there is a need for the road in the first place.[170]

First, the Bypass is not expected to improve mobility in the U.S. 74 Corridor in any meaningful way. Baker Engineering recently presented data showing that building the Bypass has no practical effect on travel times in Union County or the rest of the region. The data shows that out of the 256 TAZs that would be affected by the Bypass, 59% (150 TAZs) would experience absolutely no change in average commute time as a result of the Bypass, and 33% (85 TAZs) will experience less than 1 minute of change in average commute time.[171] The data demonstrates that only 8% of TAZs (21 TAZs) would save more than 1 minute on their average commute time as a result of the Bypass.[172] But most telling, the data shows that the absolute

[165] *Id.*
[166] Community Impacts Statement, at 4-5.
[167] *Id.* at 75.
[168] 2010 TIFIA LOI, Attachment 43.
[169] *Union County Growth Factors* Memo, Attachment15; Baker Engineering Presentation, at slide, Attachment 59.
[170] *See* PBS&J, *Statement of Purpose and Need: Mecklenburg and Union Counties Monroe Connector/Bypass* (February 2008).
[171] Baker Engineering Presentation, at slide 16, Attachment 59.
[172] *Id.*

maximum time savings is merely 5.7 minutes, and that the Bypass will save the average driver only 18 seconds.[173]

Second, the analysis indicates that Union County residents are not uniquely affected by an exceptionally onerous commute in the first place. Baker Engineering compiled its research into a memo specifically finding that commuting time is not a factor influencing growth in Union County.[174] The data shows that Union County's 2010 average commute time was not significantly greater than the surrounding areas, being only 2 minutes longer than the regional average and at most 4.8 minutes greater than the lowest average area commute (Rowan County).[175]

Additionally, the memo concludes that the commute time was manageable to the average driver and points to research suggesting Union County falls within a set of communities for which minor increases in commute time do not deter growth because "within a reasonable range of commute time, households will choose locations based more on other preferences, such as school quality."[176] The memo supports its conclusion, noting that this has been the case in the past as Union County has maintained a high rate of growth for the past two decades despite comparatively longer commutes.[177] The memo instead attributes Union County's past growth to factors such as available land, high median income, and good area schools, and predicts future growth will also be chiefly influenced by these factors rather than commute time.[178]

Though this data conveniently supports the NCTA's original finding that the Bypass would result in negligible growth in Union County, it necessarily raises the question: Why build the Monroe Connector/Bypass at all? The NCTA's Statement of Purpose and Need highlights U.S. 74's deficiencies, noting that it does not allow for high-speed regional travel consistent with the designations and goals of several local and state transportation plans.[179] But the Baker Engineering's data demonstrate that the Bypass and its associated high-speed regional travel capabilities do not make any tangible impact on overall travel speed in the corridor. The data also demonstrates that U.S. 74's current and projected Levels of Service have no particularly burdensome effect on commute times through Union County.

We do not yet have sufficient information to draw any conclusions as the reliability of Baker's recent analysis. However, if we take the conclusions to be true, the findings raise serious questions about why North Carolina is spending $700 million on a road that is expected to have a practically imperceptible impact on the region.

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[173] *Id.*
[174] *Union County Growth Factors* Memo, Attachment 15, at 1.
[175] *Id.* at 16.
[176] *Id.* at 15.
[177] *Id.* at 15-17.
[178] *Id.* at 9-14.
[179] PBS&J, *Statement of Purpose and Need: Mecklenburg and Union Counties Monroe Connector/Bypass*, at 2-3 (February 2008) (stating need for the Bypass based on "[i]nability to serve high-speed regional travel consistent with the designations and goals of the following state and local transportation plans: the Mecklenburg-Union Metropolitan Planning Organization's (MUMPO's) Long Range Transportation Plan (LRTP), the North Carolina Strategic Highway Corridor Program, and the North Carolina Intrastate System. The existing corridor also has diminished ability to function as part of the Strategic Highway Network (STRAHNET)").

B) NCTA Must Revisit its Traffic Forecasts

49 As we explained in our comment letters during the NEPA process and throughout the litigation, the alternatives analysis for the Monroe Connector/Bypass was based on a fundamentally flawed set of traffic forecasts. The forecasts for both "Build" and "No Build" scenarios were based on a single set of socio-economic data. This approach produced "No-Build" forecasts for U.S. 74 which were dramatically overstated, almost double the true forecast, because the model presented a situation in which the traffic generated by both the Toll Highway and existing U.S. 74 was squeezed onto U.S. 74 alone.

The Fourth Circuit focused on these concerns in its opinion, highlighting the implausible situation presented in the EIS in which the 2035 "build" traffic volumes were "*less* than the 2035 'no-build' baseline traffic volume." *Id.* at 600. The Court noted that NCTA did not respond to our clients' underlying concerns on this issue, but rather "simply issued an errata table lowering the 2035 'no-build' traffic projection baseline to below the 'build' levels." *Id.* The Court went on to detail that "the Agencies offered no explanation as to the source of the error and instead summarily stated that 'the 2035 No-Build Alternative [traffic] forecast was inadvertently overestimated,' " and assured the public and permitting agencies that "all other conclusions and discussions remain valid." *Id.*

In this way, the Court recognized the importance of the flawed "no-build" data used in the traffic forecasts to the alternatives analysis. Importantly, the Court noted the fact that NCTA "eliminated the 'improve U.S. 74' category" based on the 2035 forecasts, which were found to be flawed. *Id.* at 599 n.1. In keeping with the Court's holding regarding the importance of an accurate "No-Build" baseline to the alternatives analysis, NCTA must revisit this fundamental NEPA requirement using a new, accurate baseline. As we have detailed above, significant growth is expected to occur if the Monroe Connector/Bypass is constructed. As such, it is clearly insufficient to use one set of socio-economic data for both "Build" and "No Build" scenarios.

49 cont As it moves forward with a new analysis of the Toll Highway, NCTA must create "Build" and "No Build" scenarios based on two separate sets of socio-economic data — one which reflects a situation in which the Monroe Connector/Bypass is not constructed, and one which accounts for the tremendous amount of growth and development that is expected to result from the Toll Highway. These forecasts must be used as the basis upon which to compare different alternatives, and presented to the public for review and comment.

i) Academic literature supports the conclusion that the traffic forecasts are flawed

Academic literature lends further support to the conclusion that NCTA's traffic forecasts are fundamentally flawed. Induced traffic is a commonly understood phenomenon of a new location highway, and thus reliance on a single-set of socio-economic forecasts is simply untenable.

Mark Hansen of the University of California's Institute of Transport Studies has pointed out that transportation analysts since the 1940s have consistently found that increased road capacity is correlated with increased traffic volume,[180] and that though an expanded facility may improve level of service for a period of time, the traffic generated by a new transportation project's tendency to stimulate more dispersed, automobile-dependent development calls into question the long term efficacy of any such project.[181]

Similarly, Todd Litman argues that as a result, "traffic congestion tends to maintain a self-limiting equilibrium" in that road expansion reducing congestion in the short term attracts additional peak-period trips until congestion again reaches a level that limits further growth.[182] In fact, Litman demonstrates that "[u]nder typical urban conditions, more than half of added capacity is filled within five years of project completion by additional vehicle trips that would not otherwise occur, with continued but slower growth in later years."[183] And many researchers, such as Richard Arnott and Kenneth Small, economics professors at Boston College and the University of California, Irvine, respectively, point out that in many cases, adding capacity increases congestion by concentrating traffic on a few links in the network and by reducing travel alternatives.[184]

The academic literature indicates that traffic forecasts for road projects such as the Monroe Connector/Bypass are generally highly inaccurate, often because they fail to account for induced growth. For example, Bent Flyvbjerg, et al., with the Aalborg University's Department of Development and Planning (Denmark), conducted a sweeping study of traffic forecasting, analyzing 210 projects in 14 nations.[185] The study demonstrated, with very high statistical significance, that forecasters generally do a poor job of estimating the demand for transportation infrastructure projects,[186] and that traffic forecasting have become even less accurate over the past 30 years.[187] Flyvbjerg and others have recognized that one of the most often noted cause for inaccurate traffic forecasts is a failure to account for induced growth.[188]

A1-60

C) NCTA must consider a full range of reasonable alternatives and combinations of alternatives

50 Once accurate traffic forecasts have been constructed, and a coherent statement of purpose and need been set forth, NCTA must re-consider a full range of reasonable alternatives and combinations of alternatives. Since the ruling by the Fourth Circuit, and the new understanding by local communities that the Bypass will not improve U.S. 74, a range of lower-

[180] MARK HANSEN, ET AL. (1993), AIR QUALITY IMPACTS OF URBAN HIGHWAY CAPACITY EXPANSION: TRAFFIC GENERATION AND LAND USE CHANGES, at 2-8 – 2-14, 2-28 – 2-29, Attachment 75.
[181] *Id.* at 3-29.
[182] Litman, at 3, Attachment 47.
[183] *Id.* at 10.
[184] Richard Arnott and Kenneth Small, *The Economics of Traffic Congestion*, AMERICAN SCIENTIST, Vol. 82, at 446-55 (Sept./Oct. 1994).
[185] Bent Flyvbjerg, et al, *Inaccuracy in Traffic Forecasts*, TRANSPORTATION REVIEWS, vol. 26, no. 1, 1-24 (January 2006), Attachment 76.
[186] *Id.* at 9-11.
[187] *Id.* at 12-13.
[188] *Id.* at 16; *see, e.g.*, Litman at 11, Attachment 47.

50 cont cost alternative solutions have been offered by local community members. We urge NCTA to consider these alternatives.

i) Improvements to Existing U.S. 74

51 As we have emphasized in previous comments, any new analysis by NCTA must give full consideration to upgrades to U.S. 74. As we noted in previous comment letters and during the litigation, NCTA commissioned a study in 2007 which showed that for less than $14 million in short-term and long-term traffic management solutions could yield dramatically reduced congestion and an acceptable level of service along the whole corridor in Union County, except for one interchange. The original rejection of this alternative by NCTA was based on the traffic forecasts that the Fourth Circuit found to be flawed. A new EIS must revisit this and other "functional" alternatives for the corridor, as suggested in detail in our comment letters. *Id.* at 599 n.1

There has been renewed interest in the Superstreet concept as part of a solution to solve traffic problems on U.S. 74. Members of the local community have been very enthusiastic about solutions which will directly address the congestion on U.S. 74, unlike the Bypass which is not intended to improve existing traffic flow. For example, during the stakeholder interviews associated with the U.S. 74 Revitalization Study, a representative for the Town of Monroe stated a preference for superstreets and a desire to study the elimination of signalized intersections on U.S. 74.[189] At this same meeting, a representative from NCDOT stated that the "long term vision" is to convert U.S. 74 to a superstreet-type design, noting the superstreet recommendations in the Stantec study.[190] He explained that though NCDOT has a coordinated traffic system through the length of U.S. 74, upgrading to Superstreet could have a real impact, as the current cycle lengths are very long due to the high volume of traffic on 74, resulting in traffic build up and lengthy waits on the side streets.[191] NCTA presented the Superstreet concept to members of the Stallings Town Council on September 24, 2012.[192] Among the many benefits mentioned during that presentation were improved travel times, improved safety, and the reduced environmental and fiscal costs associated with upgrading the existing infrastructure instead of constructing a new location facility.

Other upgrades to U.S. 74 would include better traffic signal optimization — another issue explored in detail in the 2007 U.S. 74 corridor study. We also urge NCTA to look at patching up the locals businesses and side streets with service roads. This would help residents wishing to visit a number of businesses along U.S. 74. Similar concepts have been suggested for other corridors plagued by local traffic congestion.[193]

[189] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 2 (Jan. 18, 2011), Attachment 74.
[190] *Id.*
[191] *Id.*
[192] Stantec Consulting Services, *Superstreets: A Tool for Safely and Efficiently Managing Congestion* Presentation (Sept. 24, 2012), Attachment 77; Town of Stalling Town Council, Meeting Minutes (Sept. 24, 2012), Attachment 78.
[193] Glatting Jackson Kercher Anglin, Inc., *A New Way To Work: Implementation Analysis* (April 2009), Attachment 79.

As you know, SELC has commissioned an expert to look into upgrades to existing U.S. 74 including an upgrade to a superstreet and other low-cost solutions such as traffic signal optimization. That work is on-going and we will share it with NCTA when it is finalized. We urge NCTA to look at the Superstreet concept, and other recommendations suggested in the 2007 U.S. 74 Study as part of a suite of low-cost solutions to improve congestion on existing U.S. 74.

Since publication of the original EIS, several local government entities have begun their own investigation into improving existing U.S. 74 with the U.S. 74 Revitalization Study. The Study is a coordinated effort on the part of Union County, Town of Stallings, Town of Indian Trail, City of Monroe, MUMPO and NCDOT. They intend to develop a coordinated land use, urban design, economic development, and multi-modal transportation plan, to be implemented by the local governments and NCDOT. They plan to study and integrate existing and projected land use patterns with strategic regional transportation needs for the existing U.S.-74 corridor.[194] The initial Framework Plan was completed in June 2012,[195] and the Final Recommendation and Implementation Strategies are slated to be completed in early 2013.[196] The Framework Plan suggests a series of improvements such as expanded transit, intersection improvements.[197] We urge NCTA to consider the ongoing efforts and incorporate the conclusions and recommendations in NCTA's new environmental review.

ii) Other Union County Road Improvements

A1-61

52 Additionally, NCTA should also consider the value of improvements to other Union County roads that could provide alternative routes and thereby lessen traffic congestion on U.S. 74. We have included some examples below that should be considered.

1) *Old Monroe Road*

52 cont Old Monroe Road runs parallel to U.S. 74 along its southwestern side. The road crosses the entire length of the City of Monroe. By improving Old Monroe Road, NCTA could provide local traffic with a proximate alternative to U.S. 74, allowing local residents the option to easily move through Monroe's core business district without getting stuck in U.S. 74's congestion. In fact, during stakeholder interviews conducted during the U.S. 74 revitalization study, residents said that they currently use Old Monroe/Old Charlotte Roads to bypass U.S. 74.[198] And during these same interviews, developers stated that the road had "real development/redevelopment

[194] U.S.-74 Corridor Revitalization Study, Project Overview, *available at* http://www.us74corridor.com/#!__page-0.
[195] HNTB North Carolina, P.C., *U.S.-74 Corridor Revitalization Study: Framework Plan* (June 2012), *available at* http://media.wix.com/ugd/a3265a_773592b3da932a12981c9d670c4d6212.pdf?dn=U.S.-74%2BCorridor%2BStudy%2BFramework%2BPlan%2BReport.pdf, Attachment 7.
[196] U.S.-74 Corridor Revitalization Study, Schedule, *available at* http://www.us74corridor.com/#!__page-0/schedule, Attachment 80.
[197] HNTB North Carolina, P.C., *U.S.-74 Corridor Revitalization Study: Framework Plan*, at 78-100 (June 2012), Attachment 7.
[198] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Residents Meeting Notes, at 1 (Jan. 18, 2011), Attachment 81.

potential, especially if Old Monroe/Old Charlotte Hwy is widened" and noted that the "widening o[f] Old Monroe/Old Charlotte is very important to the success of the area."[199]

2) *Secrest Shortcut*

52 cont NCTA should consider improvements to Secrest Shortcut for the same reason. Because Secrest Shortcut runs parallel to U.S. 74 along itss northeastern side, improvements to the road could provide local drivers with another option to avoid getting stuck in traffic on U.S. 74. In fact, Secrest Shortcut falls almost directly within the proposed pathway of the Monroe Connector/Bypass from Hemby Bridge to Fowler Road, demonstrating that it could service many of the same users expected along the proposed Bypass.

3) *NC 218*

52 cont We also urge NCTA to consider improvements to NC 218. NC 218 begins at U.S. 74, east of Marshville, and connects with US 485 near Mint Hill. The route runs north of the proposed Bypass, but improvements to NC 218 could accomplish many of the same transportation goals as the Bypass and cost much less. Improving NC 218 would serve non-local traffic seeking a quick route through Union County that avoids the in-town congestion through Stallings, Indian Trail, Monroe, Wingate, and Marshville. At the same time, diverting through-traffic that would otherwise rely on U.S. 74 could lessen the congestion on U.S. 74, returning 74 to primarily local use.

iii) Freight Rail Expansion

In previous comments, we have urged NCTA to consider increased rail freight options as an alternative that would help alleviate some of the truck traffic from U.S. 74. In response, NCTA has argued that freight rail expansion would not address the project purpose and that freight rail improvements would not eliminate the truck usage of US 74.[200] While freight rail alone is not the only answer to transportation problems in Union County, we believe it could form an important part of the solution.

53 In light of the recent interest CSX railway has shown in a new terminal at the proposed Legacy Park, we urge NCTA to reconsider freight rail as part of a range of solutions to improve mobility in the corridor. As noted above, the Executive Director of NCTA went to Jacksonville to lobby CSX to come to Union County. Surely if the agency can make such a pitch on behalf of a private development, it can also do so on behalf of the state and the citizens it is charged with serving.

iv) Transit

54 In previous comment letters, we have also suggested that NCTA take a closer look at transit options in the corridor as part of a comprehensive solution to improving mobility. As

[199] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Developers Meeting Notes, at 2 (Jan. 18, 2011), Attachment 82.
[200] Monroe Connector/Bypass FEIS Appendix B, at B-3-34 – B-3-35.

54 cont with the freight options, NCTA rejected this solution without analysis. In particular, NCTA claims that transportation services in the near future and the current and future land use densities in Union County would not support increased transit at a level necessary to improve traffic flow on US 74, and noted that transit could not provide a high-speed facility to serve both individual travelers and freight trips.[201] We urge NCTA to take another look at such options.

55 The viability of transit alternatives has been discussed at length in conjunction with the U.S. 74 Revitalization Study. In the transportation stakeholder meetings for the Study, representatives of the Charlotte Area Transit System ("CATS") noted that they see U.S. 74 as a potential transit market.[202] During these same interviews, local developers also recognized that transit "would make sense" for Union County residents, as a large percentage must commute to work in Mecklenburg County.[203] The CATS representatives noted that while Union County transit users do not save much commute time currently, they do save in gas and parking expenses, as well as driver frustration.[204]

And expanded transit facilities would almost certainly improve the flow of traffic on U.S. 74 by removing commuters from the roads at peak time. In fact, the CATS representatives pointed out that ridership from Union County was steady, and suggested that Union County could entice more ridership by providing more park-and-ride locations and more turn-around locations for buses, thereby making CATS operations easier.[205] The CATS representatives also stated that the current Bus Rapid Transit stations in Union County are not ideally located in relation to U.S. 74, but noted that there will be opportunities in the near future to re-plan more convenient locations.[206] They suggested that park-and-rides could be an interim solution for Union County residents seeking to access the express routes into Mecklenburg County.[207]

In the previous EIS, NCTA stated that combining a Mass Transit Alternative concept with other modes also would not be practicable, as the mass transit element would add substantial costs to any alternative.[208] But as we have noted above, the cost of improving U.S. 74 is significantly lower than the cost to build the Bypass, and we are unconvinced that improving U.S. 74 while also expanding existing bus lines is cost prohibitive when a nearly $800 million road is the alternative. The CATS representative explained that though CATS's current partnership with Union County is focused on bus transit, this understanding could be expanded in the future. Indeed, CATS has expressed the intent to extend rapid transit across the county line.[209] As such, we urge NCTA to take these discussions under advisement and study

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[201] *Id.* at B-3-34.
[202] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 1 (Jan. 18, 2011), Attachment 74.
[203] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Developers Meeting Notes, at 2 (Jan. 18, 2011), Attachment 82.
[204] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 1 (Jan. 18, 2011), Attachment 74.
[205] *Id.*
[206] *Id.*
[207] *Id.*
[208] Monroe Connector/Bypass FEIS, Appendix B, at B-3-34.
[209] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 1 (Jan. 18, 2011), Attachment 74.

55 cont the effect of encouraging greater transit ridership in Union County as a mechanism for managing congestion on U.S. 74.

v) Combinations of alternatives

In addition to looking at each of these alternatives discussed above in isolation, NCTA should consider the ability of combinations of different alternatives to meet the revised, clarified, statement of purpose and need. While one alternative standing in isolation may not meet the objectives articulated in the statement of purpose and need, combinations of different alternatives might. NCTA must look at how a combination of alternatives including upgrades to Union County roads, increased freight rail, and transit improvements could work together as a comprehensive solution. *Davis v. Mineta*, 302 F.3d 1104, 1122 (10th Cir. 2002).

vi) Fewer Exits

In addition to analyzing alternatives to the Monroe Connector/Bypass, we also urge NCTA to analyze alternative designs to the proposed toll road. The current design includes nine separate interchanges. NCTA has failed to articulate why so many interchanges are needed if the purpose of the road is to improve mobility from I-485 to Marshville. Local stakeholders, such as the realtors consulted during the stakeholder interviews accompanying the U.S. 74 revitalization study, believe the Bypass would primarily serve through-traffic, while U.S. 74 would continue to serve the local market.[210] Traffic passing through the corridor does not require intermediate interchanges.

56 Given the lack of need for nine interchanges to meet the stated purpose and need for the toll highway, we urge NCTA to consider designs of the bypass with fewer exits. By reducing the number of exits, the road would become a "true bypass" and would offer less opportunity for sprawling development and associated environmental impact. Thus between different toll road alternatives, a design with fewer exits must be the "Least Environmentally Damaging Practicable Alternative" required by Section 404 of the Clean Water Act. 40 C.F.R. § 230.10(a).

D) <u>NCTA must Perform a Detailed Study of Existing and Future Users of U.S. 74</u>

57 Despite its unshaking commitment to the Monroe Bypass as the best solution for Union County, NCTA has never presented a clear picture of the existing traffic patterns in the U.S. 74 corridor. For example, NCTA does not know what percentage of the traffic in the corridor is "local" versus the percentage of the traffic that is travelling through the corridor from end to end.[211] This deficiency in NCTA's analysis is striking. Because the intent of the Bypass is to speed travel from one end of the corridor to another, knowledge about the percentage of traffic making that trip is tremendously important. Likewise, with regard to future traffic and congestion projections for existing U.S. 74, it is important to know how much local traffic will

[210] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Realtor Meeting Notes, at 2 (Jan. 18, 2011), Attachment 83.
[211] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 3 (Jan. 18, 2012), Attachment 74.

continue to use that roadway. The Bypass will not be helpful for travelers making local trips. Thus, if the majority of current trips are in fact local, there will be no benefit from the Bypass and little purpose for the Bypass. Similarly, NCTA has indicated that it does not have a good sense of how many trucks will use the bypass if it is constructed,[212] again making the need for and potential success of the Bypass unclear.

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NCTA's only attempt to look at this issue was in its analysis of future traffic and revenue projections. The analysis in that document is not encouraging. A survey conducted as part of the study indicated that over 50% of trips in the corridor began in either Monroe or Indian Trail-making the bypass an unlikely option.[213] Furthermore, 28% of trips were from one place in Monroe to another place in Monroe, again a trip that will not be replaced by the Bypass.[214] The survey indicated very little "through traffic," i.e. trips from one end of the Bypass to another. Before NCTA moves any further with this Bypass, it is essential that NCTA analyze who exactly is going to use the proposed Bypass. Only then can it perform a thorough analysis of different alternative solutions.

E) NCTA should Analyze the Impact of Removing the Strategic Highway Corridor and Designation from Existing U.S. 74

A1-63

As noted in the EIS, existing U.S. 74 is designated as a Strategic Highway Corridor (SHC) by the North Carolina Department of Transportation.[215] This designation accords U.S. 74 a special status. The primary purpose of the Strategic Highway Corridors initiative is to provide a network of high-speed, safe, reliable highways throughout North Carolina. Designation within this program charges NCDOT with the responsibility to ensure that the road remains a "high-speed, safe, reliable highway," and includes it within the Strategic Highway Corridors Initiative's series of planning and implementation efforts.[216] In particular, designation as a Strategic Highway Corridor gives a roadway an additional and prioritized avenue for access to funding for studies and improvements.[217]

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If the Monroe Connector/Bypass is constructed, however, the SHC designation will be moved from existing U.S. 74 to the Toll Highway.[218] During the transportation stakeholders interviews conducted in the preparation of the U.S. 74 Revitalization Study, a NCDOT representative stated that the Bypass would take the SHC designation from U.S. 74. He noted that based on NCDOT's most recent map, U.S. 74 would lose its SHC designation from its

[212] *Id.*
[213] NCTA, *Final Report: Proposed Monroe Connector/Bypass Comprehensive Traffic and Revenue Study* (October 2010) at 3-5, Attachment 84.
[214] *Id.* at 3-6.
[215] North Carolina General Statute § 136-178.
[216] *See* NCDOT, Strategic Highway Corridors Overview, *available at* http://www.ncdot.gov/doh/preconstruct/tpb/shc/overview/, Attachment 85.
[217] *See, e.g.*, NCDOT, Strategic Highway Corridors Project Planning and Design, *available at* http://www.ncdot.gov/doh/preconstruct/tpb/shc/implementation/Project/; NCDOT, Strategic Highway Corridors Long-Range Planning, *available at* http://www.ncdot.gov/doh/preconstruct/tpb/shc/implementation/Systems/, Attachment 86.
[218] U.S.-74 Corridor Revitalization Study Stakeholder Interviews, Transportation Meeting Notes, at 2 (Jan. 18, 2012), Attachment 74.

58 cont

intersection with the Bypass to the middle of Monroe. NCTA should study and explain the impact of removing this designation.

In addition to this state designation, U.S.-74 is currently designated as part of the National Highway System, which includes it within the federal-aid highway system, and in particular, it is part of the Strategic Highway Network ("STRAHNET"). STAHNET is a federal designation given to roads that provide defense access, continuity, and emergency capabilities for movements of personnel and equipment; such routes are required to meet AASHTO (American Association of State Highway Transportation Officials) guidelines for the facility type proposed.[219] It is currently unclear what effect the Bypass would have on these designations or U.S.-74's current eligibility for federal highway funds for improvement or maintenance. NCTA should address this issue as well.

D) NCTA IS ENGAGING IN ILLEGAL PREDETERMINED DECISION-MAKING

The purpose of NEPA is to disclose environmental impacts of project alternatives to decision-makers and the public so that thoughtful informed decisions can be made with regard to major federal actions that will have major impacts on the environment. *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989). As such, NEPA must proceed in a way to inform future decisions, rather than just as a rubber stamp to rationalize or "justify decisions already made." 40 C.F.R. § 1502.5.

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Recent statements and actions make it clear that NCTA has already made its decision and does not intend to perform the new analysis required by the United States Court of Appeals to revisit that decision. Rather than revisit its analysis, NCTA intends only to "re-explain" its analysis and has no intention of revisiting its pre-determined conclusion that it will construct the Monroe Connector/Bypass.[220] This approach is a clear violation of the mandate that NEPA not be used to justify predetermined decisions. Further, despite the Fourth Circuit's requirement that the agencies revisit their analysis of the project and present that analysis to the public, there will be no true opportunity for the public to be involved in the decisionmaking process because the agency has already determined that the project will proceed exactly as originally planned.

The official NCTA press statement regarding the Fourth Circuit ruling explained that "[w]hile this ruling will cause delays, it does not mean the project will not move forward."[221] In the Union County weekly, NCTA flatly stated the Department's intent to "continue work on bringing the Monroe Bypass to Union County despite recent setbacks for the massive project."[222] At community meetings, NCTA has repeatedly stated that it is "fully committed" to building the

[219] Monroe Connector/Bypass, Final Statement of Purpose and Need, at 10-11 (Feb. 2008).
[220] *See, e.g.*, Stallings Town Council Meeting (Sept. 24, 1012), *minutes available at* http://stallingsnc.granicus.com/DocumentViewer.php?file=stallingsnc_391df462d837e8bd3bd5ca9e749afdae.pdf&view=1, Attachment 72.
[221] NCDOT, *Press Release: Statement from NCDOT Secretary Gene Conti Regarding Monroe Bypass Court Opinion* (May 3, 2012), *available at* https://apps.ncdot.gov/newsreleases/details.aspx?r=6423, Attachment 87.
[222] *NCDOT Keeps Focus On Monroe Bypass Despite Setbacks*, UNION COUNTY WEEKLY (July 20, 2012), *available at* http://www.unioncountyweekly.com/news/2012/07/ncdot-keeps-focus-on-monroe-bypass-despite-setbacks/, Attachment 88.

project and gives no indication that there would be further opportunity for public input or the reconsideration of alternatives.[223] Further, despite NCTA's indication in the presentation to the contrary, right-of-way acquisition continues at a significant pace, under the guise of the "hardship" exception.[224]

This course of action is even more troubling because it ignores completely the very nature of the flawed process that resulted in the decision invalidated by the Fourth Circuit Court of Appeals. The Court's ruling requires a process that ensures that the public and agencies be accurately informed and fully involved in the decision-making process as envisioned by NEPA. *N.C. Wildlife Fed'n*, 677 F.3d at 601-03. The Court made clear that "the broad dissemination of information mandated by NEPA permits the public and other government agencies to react to the effects of a proposed action at a meaningful time." *Id.* at 601-02 (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). Indeed, the Court went on to state, "[t]he very purpose of public issuance of an environmental impact statement is to 'provid[e] a springboard for public comment.'" *Id.* at 603 (citing *DOT v. Pub. Citizen*, 541 U.S. 752, 768 (2004)).

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NCTA's announced course of action has already been rejected by the Fourth Circuit. *N.C. Wildlife Fed'n*, 677 F.3d at 600. In our briefs to the Court we explained that, for the severely flawed DEIS traffic forecasts, the Department's response was to "rig up" some forecasts "for the file" while concurrently proceeding ahead with finalizing the FEIS.[225] There was no application in the FEIS, or otherwise, of the corrected forecasts to revisit the underlying conclusions and no analysis to show how these dramatically reduced forecasts might influence the selection of alternative transportation solutions. It appears that NCTA intends to repeat this course of action.

A1-64

We appreciate the opportunity to submit these comments at this time. We hope NCTA will find our submittal useful as it continues its environmental review of the Monroe Connector/ Bypass. If it would be helpful to discuss these concerns, we would be more than happy to meet with you at your convenience.

[223] Stallings Town Council Meeting (Sept. 24, 1012), *minutes available at* http://stallingsnc.granicus.com/DocumentViewer.php?file=stallingsnc_391df462d837e8bd3bd5ca9e749afdae.pdf&view=1, Attachment 72.
[224] Josh Whitener, *Citizens Challenge NCDOT's Decisions*, UNION COUNTY WEEKLY (June 22, 2012), *available at* http://www.unioncountyweekly.com/news/2012/06/citizens-challenge-ncdots-decisions/, Attachment 89.
[225] *See* Christy Shumate, email to John Burris & Jennifer Harris (Feb. 25, 2010), Attachment 90.

Sincerely,

Frank Holleman (KH)

Frank Holleman
Senior Attorney

Kym Hunter
Staff Attorney

CC (via e-mail and U.S. mail):

Tim Gestwicki, NCWF
Dean Naujoks, Yadkin Riverkeeper
June Blotnick, Clean Air Carolina
Scott Slusser, NCDOJ
Secretary Gene Conti, NCTA
John Sullivan, FHWA
Chris Militscher, USEPA
Liz Hair, USACE
Carl E. Pruitt, USACE
Marella Buncick, USFWS
Marla Chambers, NCWRC
Alan Johnson, NCDWQ
Amy Simes, NCDWQ
Bob Cook, MUMPO
Dana Stoogenke, RRRPO

Encls.

Table A-4: Southern Environmental Law Center

Document: i004 Letter dated November 30, 2012

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	Indirect and Cumulative Effects	NCTA's original EIS concluded that the Monroe Connector/Bypass would have less than a 1% impact on growth outcomes. As the Fourth Circuit noted, this conclusion was reached despite the fact that the NEPA process was "devoid of any evidence establishing that the region is developmentally saturated such that a major toll road will have no appreciable environmental impact." *N C. Wildlife Fed'n,* 677 F.3d at 603 n.2. Rather the outcome was obtained by reliance on inaccurate models which assumed the construction of the Monroe Connector/Bypass in both the "Build and "No-Build" scenarios. *Id*. At 600. NCTA has indicated that it will not address the reality of this conclusion, nor will the agency correct the flawed model from which the conclusion sprang.	The Draft Supplemental Final EIS concludes that the difference between future (2030) land use conditions under No-Build or Build conditions would vary by about 1 percent between developed and undeveloped categories within the entire project study area. This conclusion is based on extensive analysis as documented in the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) (ICE Update). The socioeconomic projections that formed part of the basis for the future "No-Build" and "Build" scenarios are extensively analyzed in Section 3.0 of the ICE Update, and the projections were determined to be reasonable and reliable. NCDOT specifically analyzed the supposed "flaw" in the model in Section 3.2 of the ICE Update and determined the issue had no effect on the projections.
2	Indirect and Cumulative Effects	Local elected officials and other public figures are near united in their belief that the Monroe Connector/Bypass will bring growth and development to Union County.	NCDOT completed its quantitative indirect and cumulative effects analysis based on the CEQ regulations and its own guidance manual, *Guidance on Indirect and Cumulative Impacts Assessment*. As documented in Section 1.6 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering Inc., November 2013), numerous local planners and others were interviewed and current adopted planning documents were reviewed to identify potential indirect effects, in particular land use effects. More importantly, NCDOT considered relevant studies and research about growth factors in Union County and summarized this analysis in the Draft Supplemental Final EIS and ICE Update.
3	Indirect and Cumulative Effects	For example, the Union County Chamber of Commerce has acknowledged the Monroe Connector/Bypass's propensity to induce growth, noting it would provide a significant boost to existing businesses and factor into the decision of any business considering operations in the county.[2] It has noted that the Bypass would "greatly enhance" Union County's "competitiveness for office and industrial development,"[3] and stated that "[t]own leaders are preparing for more commercial and residential growth plus increased traffic with completion of the Monroe Bypass freeway."[4] And when addressing a delay in the Bypass, Union County Chamber of Commerce President Sharon Rosche stated: "That's going to delay progress .. . [i]t will delay Union County from doing the things it needs to do to attract different types of businesses and corporations to enhance our economic tax base. "[5]	NCDOT and FHWA appreciate and understand the position of the Union County Chamber of Commerce. However, the Draft Supplemental Final EIS presents data and analysis of the growth likely to occur in the project area. It also highlights and summarizes other research of future growth projections in Union County.

Table A-4: Southern Environmental Law Center

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COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
4	Indirect and Cumulative Effects	The Charlotte Chamber of Commerce has also has determined that the Bypass will spur growth. In a recent letter to the Charlotte Observer, Charlotte Chamber Chairman Frank Emory and Chamber President Bob Morgan stated: "That there will be an economic impact of the Garden Parkway and the Monroe Connector is not debatable."[6] They argued that the Bypass is a "critical component" of infrastructure affecting the movement of goods through that area of the state and emphasized that "[t]he fact that road and transportation infrastructure spurs economic development is evident throughout history."[7]	See response to Comment #2 in this letter (i004).
5	Indirect and Cumulative Effects	Further, the City of Monroe has recognized that the Bypass "could create new commercial development opportunities along the new roadways."[8] And local elected officials, such as Indian Trail's Mayor John Quinn, also believe the Monroe Connector/Bypass would cause growth in Union County, stating that the Bypass would decrease traffic on U.S. 74 by a third and open up opportunities for new development.[9]	See response to Comment #3 in this letter (i004).
6	Indirect and Cumulative Effects	Regarding the Indian Trail Segment, for example, the Plan posits that the "proposed Monroe Bypass will create opportunities for the Town of Indian Trail as well." It expands: "The direct access to the heart of the Town via Indian Trail Road will create an opportunity for a Mixed Use Gateway Development around the intersection of U.S.-74 and Indian Trail Road .... This mixed use development will complement downtown Indian Trail and will create a draw for the downtown by attracting motorists from the Monroe Bypass and U.S.-74 corridor. This development could be comprised of major retail, residential, and office uses organized in a town-center layout with equal emphasis on pedestrians and bicyclists."[12]	See response to Comment #3 in this letter (i004). Furthermore, specific expectations regarding additional development in the vicinity of interchanges around Indian Trail are discussed in Section 4.2 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). The applicability of the *US 74 Revitalization Study* is discussed in Section 4.2 as well.
7	Indirect and Cumulative Effects	Community stakeholders are also anticipating growth from the Bypass. For example, the Charlotte Regional Partnership has called the Monroe Connector/Bypass "a key part of future business growth and prosperity of Union County," stating that the Bypass would be a "business asset" and "a boon for tourists and commuters."[13] And the South Piedmont Community College set out in its Master Plan that "[i]t is anticipated that major growth will occur in the Anson County service area in 2013 when North Carolina Turnpike Authority completes the Monroe Connector/Bypass highway construction project."[14] Recently, a pro-Bypass Facebook group has developed, promoting the Bypass primarily	See response to Comment #3 in this letter (i004).

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		in terms of the road's expected economic impact on Union County.[15]	
8	Indirect and Cumulative Effects	Analysis from North Carolina State Government, of which NCTA is a part, also contradicts the agency's conclusions. Earlier this year, Lieutenant Governor Dalton and the State's Logistics Task Force published a report that analyzed different transportation and logistics projects in the State of North Carolina.[16] In the report, the Task Force concludes that the Monroe Connector/Bypass is "important or critical" to a number of development projects, including the proposed Legacy Business Park, discussed below, the Intermodal Center at the Charlotte Douglas Airport, and the development of potential inland ports in Salisbury and Rowan Counties and Statesville and Iredell Counties.[17]	The scales of study for the Governor's Task Force and the indirect and cumulative effects analysis for the Monroe Connector/Bypass NEPA EIS study are not comparable. The NEPA EIS study focuses on a localized study area smaller than Union County as a whole where quantifiable indirect and cumulative impacts to land use could occur, while the Governor's Task Force study qualitatively assessed the entire state. Specifically, "The Task Force's purpose was to study the transportation and logistics needs of North Carolina currently and in the future to allow it to compete aggressively in the 21st Century economy. Also, the Task Force was directed to study North Carolina's transportation infrastructure and determine how best to move people and goods in and throughout the state to engage in the national and global marketplace." P. 9. The Governor's Logistics Task Force – Final Report does state "Key to any of the sites discussed above and in the Seven Portals Study is the completion of the Monroe By-Pass. The task force has seen this project referenced as important or critical to multiple regions, and therefore it should be one of the highest priorities for DOT." However, the report provides no specific reasons or supporting data for the key nature of the Monroe Connector/Bypass to the proposed Legacy Business Park, the intermodal Center at the Charlotte Douglas Airport, and the development of potential inland ports in Salisbury and Rowan Counties and Statesville and Iredell Counties. With regards to Legacy Park see response to Comment #12 in this letter (i004).
9	Indirect and Cumulative Effects	The Logistics Task Force Report also incorporates a study entitled the "Seven Portals Study" which discusses each region of the State in more detail. [18] The report for the Charlotte region describes the connection between the Monroe Connector/Bypass and development in Union County, explaining that manufacturing has been declining in the County and that the additional infrastructure and the proposed Legacy Business Park will be a key piece of bringing it back and attracting new development to the region.[19] Even the North Carolina Maritime Strategy cites the Monroe Connector/Bypass as important to increased development in the State.[20]	As documented in Section 1.6 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), numerous local planners and others were interviewed, and current adopted plans were reviewed, to identify potential indirect effects, in particular land use effects. As documented in Section 1 of the *Indirect and Cumulative Effects Assessment* (Final EIS Appendix G), NCDOT worked closely with local officials and resource agencies to define the appropriate study area and scope of analysis for the indirect and cumulative effects analyses. Finally, NCDOT has documented the expected induced land use effects of the proposed project in Sections 4.2 and 5.1 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) and those induced effects include expected additional commercial and industrial development consistent with local approved future land use plan.

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COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
			With regards to Legacy Park see response to Comment #12 in this letter (i004).
10	Indirect and Cumulative Effects	If it were not enough that State level reports predict significant growth and development from the Bypass, statements from NCTA itself have echoed the same message. For example, John Collett, a member of the N.C. Board of Transportation and NCTA Board of Directors, stated in an editorial in the Charlotte Business Journal that the Monroe Connector/Bypass "will create jobs" because it will relieve congestion on a major route into Charlotte by providing an alternative to U.S. 74.[21] He also explained that the Bypass will result in growth because it "will make the region more attractive to industry and tourism and a better location for commercial shippers. "[22]	There is no quantitative data in this comment that would change conclusions of the indirect and cumulative effects (ICE) analysis. The ICE analysis indicated greater industrial development in certain areas under a Build Scenario as documented in Sections 4.2 and 5.1 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). The expectation of additional commercial and industrial development implicitly assumes there would be more jobs in the study area under a Build Scenario compared to a No-Build Scenario.
11	Indirect and Cumulative Effects	Despite statements at every level of Government that the Monroe Connector/Bypass will bring significant growth and development to Union County and beyond, NCTA persists in advancing the fiction in its environmental documents that the project will not impact growth outcomes. NCTA's draft "Union County Growth Factors'' Memo states that ''transportation infrastructure improvements are not the main driver of the rapid growth in Union County." Rather, the memorandum suggests that income, land availability and school quality are the driving forces behind growth in the area.[24] The memo thus concludes that the previous conclusions about the Monroe Connector/Bypass in the original EIS remain correct. NCTA must reconcile these conflicting statements. "The very purpose of public issuance of an environmental impact statement is to 'provid[e] a springboard for public comment.' " *N C. Wildlife Fed'n,* 677 F.3d at 603 (quoting *DOT* v. *Public Citizen,* 541 U.S. 752, 768 (2004)). State lawmakers are poised to invest $24 million per year for forty years to the Monroe Connector/Bypass, based on their repeatedly-stated conclusion that the toll road will spur growth and economic development. If that conclusion is untrue, the State must make that clear and explain why the ingrained beliefs of public officials are false and mistaken. Only then can the public know exactly how and why its tax dollars are being spent.	The analyses prepared for this project do not state that the project will not impact growth outcomes as suggested by the commenter. The Draft Supplemental Final EIS and the ICE Update present data and analysis of the growth likely to occur in the project study area. These documents also highlight and summarize other research of future growth projections in Union County.
12	Indirect and Cumulative Effects	One of the most striking examples of these plans is the proposed Legacy Business Park ("the Park"), a 5,000-acre business park and "inland port" planned to be constructed at the end of the Monroe Connector/Bypass in Wingate.[25] As planned, the Park would be the largest business park in	Legacy Park is highly unlikely to develop in the manner described. NCDOT has interviewed numerous officials and other interested parties and has fully considered the likelihood of the development of Legacy Park and has documented that in Section 4.2 of the ICE Update.

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		North Carolina and would attempt to bring over 20,000 jobs to the region.[26] Just Phase 1 of the project is itself a massive undertaking involving significant growth: The first stage of Park development involves 1750 acres accommodating 11 rail-served industrial sites, a light industrial site, two office institutional sites, and a rail facility adjacent to the existing CSX railline.[27] However, the 5,000 acre footprint of the fully built-out park is just a fraction of the development and construction that will result in the event that the Park moves ahead as planned.	
13	Indirect and Cumulative Effects	Plans for the Park make clear that it is integrally connected to the Monroe Connector/Bypass. Indeed, the Park's very feasibility depends on construction of the Toll Highway.[28] A road, "Legacy Parkway," is already planned to connect the park to the Bypass via the Forest Hill interchange;[29] upon completion of the Monroe Connector/Bypass, the western entrance to Project Legacy would be a short distance to I-485 and allow even faster access to the Charlotte-Mecklenburg area.[30]	See response to Comment #12 in this letter (i004).
14	Indirect and Cumulative Effects	And even before the Legacy Parkway was publicly proposed, the NCTA recognized the importance of keeping key project proponents engaged in the planning process for the Bypass.[31]	The meeting minutes referenced do not appear to reference Legacy Parkway or Legacy Park as the commenter suggests.
15	Indirect and Cumulative Effects	As the environmental review process moved forward, NCTA assured local leaders that the Bypass plans would accommodate Park access.[32]	See response to Comment #12 in this letter (i004).
16	Indirect and Cumulative Effects	For example, Lt. Governor Dalton highlighted the Legacy Park's economic development potential at the Union County Partnership for Progress's 2011 Annual meeting.[33] Dalton discussed the growth likely to result from the Park and noted that transportation projects like the Park's planned rail connections will ensure that Union County will be a part of statewide initiatives to make North Carolina a key East Coast distribution hub. And Keith Crisco, N.C. Commerce Secretary, praised and promised support for the project.[34] The Anson County Chamber of Commerce has also recognized the likelihood of growth impacts associated with the Legacy Park; on February 18, 2009, the Chamber met to discuss the "dramatic impact" expected to result from the project.[35]	See response to Comment #12 in this letter (i004).
17	Indirect and Cumulative	The Union County Board of Commissioners included the Park in their 2025 Comprehensive Plan, stating that the Wingate-Marshville area "is likely to be a major opportunity area once the new Monroe	See response to Comment #12 in this letter (i004). The Union County 2025 Comprehensive Plan does not include the Legacy Park

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	Effects	Connector/Bypass is in place."[36] The Board also incorporated the Park into its employment forecasts.[37] The Park is also assumed in the U.S.74 Revitalization Study projections for industrial growth in the area.[38]	development as suggested by the commenter. NCDOT confirmed this conclusion with the Union County Director of Planning.
18	Indirect and Cumulative Effects	Many other sources have highlighted that the Bypass is critical to the success of Legacy Park. Maurice Ewing, head of Union County Partnership for Progress, the county's economic development arm and champion of the project, has acknowledged that the Park in its current form would not proceed without the Bypass,[39] stating that "[w]ithout the bypass, Legacy doesn't work .... "[40] and that the Monroe Connector/Bypass "will be critical" to the Park.[41] Marshville Mayor Franklin Reese also emphasized this connection, explaining recently that if the Bypass is built, it is "90 percent certain" that the Park would follow.[42] And Union County planning director Richard Black stated that the Park is contingent on the Bypass. Black concluded that the Park is a likely development so long as the Bypass is built and that it should have been included in Union County's 2010 long-range land-use plan.[43]	See response to Comment #12 in this letter (i004).
19	Indirect and Cumulative Effects	Further, as noted above, the recently released report from the Governor's Logistics Task Force and the associated Seven Portals Study further underscore the connection between the two projects and the dependency of the Park on the Bypass. The studies note that the Bypass is "key" not only to Legacy Park, but to a number of proposed developments in Union County.[44] In other words, the Park will not move forward without the Monroe Connector/Bypass, and is thus an indirect effect of the Bypass that must be considered in the environmental analysis.	See response to Comment #12 in this letter (i004).
20	Indirect and Cumulative Effects	The Union County Board of Commissioners has approved a $556 million, 20-year capital improvement project that includes plans to install water and sewer lines to serve the Legacy Park. [48] The Park has also been incorporated into planning for the Centralina Freight-Mobility Plan.[49]	See response to Comment #12 in this letter (i004).
21	Indirect and Cumulative Effects	Despite the clear requirement to disclose Legacy Business Park and associated development as an indirect impact of the Bypass, NCTA failed to perform this analysis in its initial EIS. The only reference to the project was a brief mention in the Qualitative ICE study which failed entirely to mention the connection between the Business Park and the Toll Highway. Indeed, the EIS suggests that the decision to build the Park	See response to Comment #12 in this letter (i004). Additionally, the local planners and the MPO did not find the Legacy Park development as reasonably foreseeable and did not include the development in the socio-economic forecasts for its 2035 LRTP and subsequent updates.

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		is entirely independent of the proposed Bypass, despite all the evidence to the contrary set out above. Most troubling, the failure to present the link between the two projects to the public appears to have been purposeful. In an e-mail obtained by SELC through a public records request, one of Legacy Park's key proponents stated that he would heed NCTA's advice and be "guarded" and "cautious" in discussing the essential relationship between the Business Park and the Bypass. This same individual has continued to warn active parties to be "particularly sensitive to the need to keep this project and [their] current level of activity confidential." These comments suggest that NCTA is once more failing to be open and transparent with the public. As NCTA moves forward with its analysis of the Monroe Connector/Bypass, it is essential that reasonably foreseeable development dependent on the highway's construction be fully examined in a future ICE analysis. NCTA has indicated that it intends to discuss indirect effects with RPOs in the area. A discussion with the Rocky River RPO ("RRRPO") should be informative in this regard. Records indicate that the RRRPO has already generated socioeconomic forecasts that anticipate Legacy Park's construction, analyzing the Park's regional impacts over the next 30 years. The RRRPO predicts the creation of thousands of jobs in the area as a result of the Park and recognizes that the Park's likely impact includes a rail facility, distribution centers, increased truck traffic, and the build out of other facilities such as office, institutional, commercial, and manufacturing facilities.[60] The RRRPO also recognizes that the associated growth could prompt offsite housing developments and predicts they would occur mostly north and west of Marshville and to some extent in Anson County.	
22	Indirect and Cumulative Effects	Plans from the Towns of Wingate and Marshville also demonstrate that the Monroe Connector/Bypass will induce substantial development. The two municipalities began strategic planning efforts in 2008 focused towards capitalizing on the growth expected from the Bypass's construction. Published plans state that the Bypass served as a "catalyst" that prompted the municipalities to join with the Union County Partnership for Progress to commission a Strategic Plan for Economic Development. The study expressly recognizes that the Bypass "will be the impetus that	The Draft Supplemental Final EIS and the ICE Update consider plans from Wingate and Marshville. Section 4.2 of the ICE Update documents how the *Strategic Plan for Economic Development, Town of Marshville, Town of Wingate (2008)* was an important contributor to the estimates of induced growth in eastern portions of the study area.

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		creates market demand for many other development projects." In light of this study, which was published before the original EIS for the Monroe Connector/Bypass was put together, NCTA's finding that the Bypass will not induce growth and development is yet again refuted. NCTA should incorporate the predictions of Marshville and Wingate into its next environmental document.	
23	Indirect and Cumulative Effects	The Union County Board of Commissioners also recognized the Bypass's potential for growth in its 2025 Comprehensive Plan. The Board states that the Bypass "will open many doors for new commerce in Union County." They state that "The U.S.-74 'Monroe' Connector/Bypass will be an important transportation facility and economic generator in the County for years to come." As such, the Plan details strategy and considerations essential to encouraging and facilitating development resulting from the Bypass.	NCDOT considered the information available in the Union County 2025 Comprehensive Plan as documented in Section 1.6 and 4.2 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013).
24	Indirect and Cumulative Effects	The conclusion that the Monroe Connector/Bypass will make little difference to growth outcomes is based on a flawed analysis performed in the Quantitative Indirect and Cumulative Effects ("ICE") analysis. As we explained in our briefs to the Fourth Circuit, this assertion is contradicted by analysis and conclusions made in other documents compiled to review the Toll Highway, including documents that form part of the EIS. NCTA's Qualitative ICE analysis of the Monroe Connector/ Bypass, unlike its "quantitative" counterpart, actually concludes that the Toll Highway induces growth. The Qualitative study concludes that there is "high potential for new residential growth" in the eastern section of the study area where "build alternatives would improve access and allow for easier and faster commutes to the Charlotte-Mecklenburg urban area'' and repeatedly cites the potential for growth in the central and eastern portions "because the project would improve travel time from those areas to Charlotte."	The Qualitative ICE states that more residential development would take place in the eastern portion of the project area, and higher density development would take place in the central portion of the project area in the vicinity of interchanges. The ICE Update includes a comparison of Build to No-Build Scenarios for land use in the study area in Map 19 and Table 20. The results show more residential development in the Build Scenario, with most new development occurring in the eastern portions of the study area, consistent with the qualitative assessment.
25	Indirect and Cumulative Effects	Similarly, the Community Impact Study in the original EIS states that "local planners believe that the project is vital to the economic well-being of Union County. Furthermore, local planners believe the project would benefit them in their goal to actively seek to attract commercial and industrial growth to boost the local tax base. "[85] The Study also explains that "[t]he project will introduce a suburban element into what	See responses to Comments #3 and #24 in this letter (i004).

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		is generally a rural environment."	
26	Indirect and Cumulative Effects	NCTA's traffic and revenue study for the proposed toll road, a necessary prerequisite for financing the project, also predicts growth and development. The study explains that "[f]uture economic growth potential is particularly important for the study of any new start-up toll facility such as the proposed Monroe Connector."[87] In the case of the Toll Highway, the study makes clear that "the population and employment forecasts" used to calculate revenue were "directly related to the growth rates of traffic predicted" by the study's model.[88] The study adds, "[o]f particular importance is that the proposed Monroe Connector is included in the model and influences the growth forecasts therein."[89]	NCDOT has fully discussed the relationships between the analyses completed for the Traffic and Revenue Study and the indirect and cumulative effects analysis in Section 3.3 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013).
27	Indirect and Cumulative Effects	Despite these forecasts of growth attributable to the Toll Highway throughout the NEPA documentation, NCTA's ultimate conclusion in its original EIS was that the Bypass would make little difference to growth outcomes.[90] The document contained no reconciliation of the different conclusions reached in different aspects of the NEPA process. Without explanation, the Quantitative ICE results were adopted as the basis for the ROD, and the Qualitative Study, the Community Impact Study, and the economic revenue forecasts were disregarded. As NCTA has indicated that it will continue to rely on the conclusion of minimal growth reached in the Quantitative ICE, it is imperative that the agency reconcile this conclusion with other statements so that the public can be provided with a clear picture of the impacts attributable to the road.	The commenter is referring to a document that was a preliminary Traffic and Revenue Study. That study was superseded by a 2010 Comprehensive Traffic and Revenue Study, which relied upon an independent economist to review the MPO's projections of forecasts. NCDOT considered the results of this study and discussed the relationships between the Comprehensive Traffic and Revenue Study and the indirect and cumulative effects analysis in the ICE update. See responses to Comments #2, 3, 11, 12, 22, 23, 24 and 26 in this letter (i004).
28	TIFIA Application	In NCTA's application for federal TIFIA funds for the Bypass, the agency made clear that the project would be a driver of growth. In an attempt to secure federal financing, NCTA told the federal government in its Letter of Interest ("LOI") that construction of the Bypass would "allow the region to continue to be an attractive location for new businesses and additional residents." Just as NCTA must be consistent within *its* EIS, so it must be consistent in all documents it is submitting to the federal government. Either the Monroe Connector/Bypass will induce growth and development or it will not. We note that an NCTA reviewer looking at the application commented that this section discussing induced growth was "a bit counter to other arguments" [sic]. We agree. The agency cannot chose	The FHWA declined to provide TIFIA financing on this project. Therefore, FHWA is not inconsistent with its analysis.

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		one reality when asking for federal money, and then another reality to avoid rigorous federal environmental permitting and mitigation requirements.	
29	Indirect and Cumulative Effects	Dr. Steve Appold was retained by the Charlotte Regional Alliance For Transportation ("CRAFT"), which includes the Charlotte area's 4 MPOs and 2 RPOs, to develop regional socioeconomic projections for the Charlotte Metrolina region for 2015-2045. After reviewing 2010 census data, Dr. Appold projected that future growth trends in the Metrolina region would be increasingly centralized, with the majority of growth occurring in Mecklenburg County and along the surrounding counties' adjacent edges.[96] Dr. Appold projected that the majority of growth in Union County would occur in the central and northwest districts (those abutting Mecklenburg County) rather than the County's more rural South and East districts, such as those in the Monroe Connector/Bypass study area. NCTA should take these predicted future trends into account when considering the impact of the proposed Toll Highway. If Dr. Appold's projections are correct, then in absence of the Monroe Connector/Bypass we would expect to see minimal growth in Union County, particularly in its rural districts where the Bypass and Legacy Park are currently planned. These new projections directly contradict the demographic and economic forecasts that NCTA relied upon in the initial Monroe Connector/Bypass EIS. Though the NCTA has accounted for Hammer's high Union County population estimates based on growth factors such as higher quality housing stock and schools, these factors do not explain why, in the absence of the Monroe Connector/Bypass, Union County would experience full economic growth including booming job growth, as predicted by NCTA, rather than serving simply as a bedroom community for the Charlotte-Mecklenburg region, as initially predicted by Dr. Appold. NCTA should carefully consider Dr. Appold's analysis in its review of the Monroe Connector/Bypass.	NCDOT has fully analyzed the currently adopted regional forecasts in Section 3 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) and determined they are reasonable representations of future growth of the FLUSA. NCDOT has been following the development of new socioeconomic forecasts for the Charlotte region and is aware of Dr. Appold's projections. NCDOT Guidance on ICE analysis recommends using *adopted* MPO forecasts when available and since Dr. Appold's forecasts have yet to be adopted, it would be premature to immediately incorporate those forecasts into a new or revised indirect and cumulative effects analysis. NCDOT met with Dr. Appold and considered the Draft 2040 socioeconomic projections. Dr. Appold's Union County projections are suggesting that current forecast growth would occur in 2040 instead of 2030. Dr. Appold has not allocated future growth to small area TAZs. Union County was the fastest growing County in the State between 2000-2010. This despite the fact that the county had no freeway miles. Researchers have well documented that the tremendous growth occurring and projected to occur is not dependent on transportation.

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30	Indirect and Cumulative Effects	Just like the myriad of other statements and projections noted above, the RRRPO estimates are inconsistent with NCTA's continued insistence that the Monroe Connector/Bypass will have almost no impact on growth outcomes. We hope that NCTA will coordinate with the RRRPO as it reevaluates the Toll Highway. We note that during the previous NEPA process, despite two suggestions to discuss socio-economic projections with Ms. Stoogenke at the RRRPO, no such coordination took place.	The *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) includes additional industrial, commercial and office development in eastern portions of Union County, as documented in Section 5 of that document. These estimates are not inconsistent with comments from Ms. Stoogenke, Director of the RRRPO. Also, see response to Comment #21 in this letter (i004).
31	Indirect and Cumulative Effects	Academic literature also supports the likelihood that the Monroe Connector/Bypass will spur growth in Union County. Transportation and planning experts have extensively studied the concept of "induced growth," finding that often adding capacity to an otherwise congested transportation corridor will initially reduce travel times, but that this increase in the service level will attract additional trips that would not have been made without the improvement.[103] As Todd Litman of the Victoria Transport Policy Institute explains, roadway improvements alleviating congestion reduce the generalized "cost" of driving, which encourages more vehicle use and ultimately greater growth in the affected areas. [104] For example, some trips may be diverted from another facility or added by drivers taking longer or more frequent trips or choosing different destinations.[105]	The commenter provides selected quotes from a Todd Littman report on "Generated Traffic and Induced Travel, Implications for Transport Planning," 6 November 2011. The selected references from the report discuss general relationships between adding highway capacity and additional highway trips in support of their comment that the Monroe Connector/Bypass will spur growth in Union County. The report does not provide specific data relevant to forecasting land use changes associated with the construction of a toll road in Union County. However, contrary to their comment, the report provides references that actually support the ICE Update conclusions. The report provides a referenced quote on page 23 that states "The available evidence does not support arguments that new transport investment in general has a major impact on economic growth in a country with an already well developed infrastructure (SACTRA 1997)" Additionally our review of the references, offered by the commenter, suggests that the commenter may have missed an important point contained in the reports for implications for transportation planning. The point being that the reports are suggesting a policy preference for pricing as a tool for solving congestion instead of adding new capacity. For example, Mr. Littman offers on page 22 that "The efficient solution to congestion is to use pricing or other incentives to test consumers' willingness to pay for road space and capacity." Gilles Duranton and Matthew A Turner, in their report titled, "The Fundamental Law of Road Congestion: Evidence from US Cities", September 8, 2009 conclude that "Together, these findings strengthen the case for congestion pricing as a policy response to traffic congestion." Therefore, conclusions offered in these reports would support the implementation of the Monroe Connector/Bypass toll road as an effective solution for congestion in Union County.

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32	Indirect and Cumulative Effects	In its recent draft "Union County Growth Factors" Memo, NCTA suggests that it is the "Build" scenario that is incorrect, stating that "it is possible that population and employment growth in Union County will be higher if the Monroe Connector is built."[106] We have not yet been given sufficient access to NCTA's analysis to review the "Build" scenario in detail, but it seems likely that it has been understated.	The Draft Supplemental Final EIS and ICE update are available to the public for review and comment.
33	Indirect and Cumulative Effects	As such, the Court made clear that the agencies must create an accurate "No-Build" baseline, and that MUMPO's socioeconomic data, which assumes construction of the Monroe Connector/Bypass, cannot form the basis of such a baseline. Despite this clear mandate, rather than set out to create a new, accurate baseline, NCTA has focused on attempting to explain why the Court of Appeals was in fact mistaken, and why continued reliance on MUMPO's Metrolina Regional Travel Demand model ("MRM") as the baseline is appropriate.	NCDOT has fully investigated the impact of the inclusion of the roadway in the travel time to employment factor in the bottom up socioeconomic forecasting process. The results of that analysis are documented in Section 3.2 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). NCDOT evaluated the impact of the inclusion of the project in MUMPO's socioeconomic and land use models. MUMPO's socioeconomic models showed no difference in Union County land use between the no-build and build scenarios.
34	Indirect and Cumulative Effects	The top-down model, which takes a large scale overview of future growth projections, was based on a number of core assumptions. One of those assumptions was that there would be sufficient infrastructure available to accommodate any future growth. With regard to transportation, the model equated distance to travel time at all points in the future. In other words, the model assumed that in the future there would be no increase in the time it would take to get from point A to point B as a result of delays on area roadways, even if there were significantly more people living in the region. In a situation such as the one predicted by this model, where there is an increasing population and thus increasing traffic, the only way that travel time can remain constant between two geographical points is if additional transportation improvements - such as the Monroe Connector/Bypass - are implemented. Otherwise, roads would eventually reach capacity and travel time would slow between two geographic points. The top-down model was thus premised on the construction of transportation improvements such as the Toll Highway.	The Commenter's assumptions regarding the inclusion of the Monroe Connector/Bypass project in the "top-down" model are not correct. The many assumptions and analyses completed in the development of the regional socioeconomic projections are fully documented and reviewed in Section 3.2 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013).
35	Indirect and Cumulative	In arguments to the Fourth Circuit, NCTA's counsel contended that because the top-down analysis does not include a transportation	NCDOT met with Dr. Appold to discuss this comment. As Dr. Appold explained in his May 29, 2013 letter to Mr. Alavi of NCDOT that "The socio-economic projections

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	Effects	network, the Toll Highway cannot have been assumed in the results. This explanation entirely missed the point. As we made clear to the court, it is precisely because the top-down process does not include a transportation network, and instead uses proximity distances as a proxy for travel time, that the Toll Highway is part and parcel of the process. Our concerns regarding top-down modeling were recently confirmed at an October 16, 2012 meeting of CRAFT when Dr. Steve Appold presented the next iteration of the top-down socio-economic forecasts for the Metrolina region. Dr. Appold confirmed that the explanation we provided to the Fourth Circuit is accurate: Top-down forecasts assume that there is sufficient infrastructure in place to keep up with expanding population, and thus inherently assume projects like the Monroe Connector/Bypass.[107]	cited in the study were neither build nor no-build scenarios. The projections are not affected by specific infrastructure investment decisions."
36	Indirect and Cumulative Effects	Thus, contrary to NCTA's contentions, even at the top-down stage, local infrastructure, such as the Monroe Connector/Bypass, and local priorities, such as projections of high growth, are factored into future forecasts both implicitly and explicitly. In recent presentations NCTA has made clear that it does not intend to address the use of top-down data that assumes construction of the Monroe Connector/Bypass for its "No Build" scenario. The EIS will thus remain based on an arbitrary and capricious assumption.	This comment is not correct. The only large scale transportation projects that affected Dr. Hammer's "top-down" forecasts were the Garden Parkway and the Route 16 improvements to Lincoln County. The many assumptions and analyses completed in the development of the regional socioeconomic projections are fully documented and reviewed in Section 3.2 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013).
37	Indirect and Cumulative Effects	During litigation NCTA adopted the position that while the Monroe Connector/Bypass was included in the bottom-up data, its inclusion was insignificant. The Court rejected this assertion. NCTA persists in yet another variation of this same argument.	See response to Comment #33 in this letter (i004).
38	Indirect and Cumulative Effects	With its initial attempts to demonstrate the insignificance of the inclusion left in tatters by the Fourth Circuit, NCTA has seized on a new explanation. The agency now asserts that in the bottom-up analysis, the proposed Bypass only reduces travel time to employment in the region by an average of 18 seconds and thus has little influence on overall growth patterns. Further, NCTA's materials state that current average Union County commuting times are just 29 minutes, only two or three minutes higher than commuting times elsewhere in the Charlotte region. These statements are at odds with other NCTA statements about the	See response to Comment #33 in this letter (i004).

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		bypass which assert that it will save drivers between 30-50 minutes. Thus, either (1) NCTA is reconsidering the projected travel time savings from the Toll Highway, or (2) the model has severe inaccuracies with regard to predictions of travel-time and the associated impact on population distribution. Such inaccuracies are highly significant as NCTA made clear throughout the NEPA process that travel time is of paramount importance in predicting where people live.	
39	Indirect and Cumulative Effects	Consequently, it is essential that NCTA restart its ICE analysis. The new study must include a "No-Build" scenario that does not include the Monroe Connector/Bypass in either the top-down or the bottom-up analysis.	NCDOT and FHWA do not agree with this response. The ICE Update and its appendix provide a rational basis to determine the indirect and cumulative impacts of the project.
40	Indirect and Cumulative Effects	Further, in keeping with NCTA's conclusion that the travel time metric is an indispensable part of forecasting future growth patterns, the model used must accurately account for the importance of travel time to employment in all scenarios.	See response to Comment #33 in this letter (i004). NCDOT addressed the improvement to accessibility / travel time that the proposed project would bring and its impact to induced growth, as documented in Section 4.2 of the ICE Update.
41	Indirect and Cumulative Effects	The second round of interviews with local planners conducted in 2009 focused specifically on the appropriateness of reliance on the MUMPO's socioeconomic data. NCTA's consultants asked local planners if they believed it would be appropriate to use these MUMPO forecasts to illustrate a future "No-Build" scenario. In the course of this investigation the vast majority of planners were unable to confirm whether or not the current socio-economic forecasts were appropriate for a "No-Build" scenario.[134]	For the ICE Update, NCDOT evaluated the effects of the project on the MPO's socioeconomic and land use models. Therefore, the interview responses described in this comment are not relevant to the analysis in the ICE update.
42	Indirect and Cumulative Effects	NCTA's consultant, Baker Engineering, once more made contact with local area planners. This contact took the form of a brief and biased email questionnaire which asked the planners to endorse the use of the MUMPO's socio-economic data. The questionnaire did not describe the underlying concern about the inclusion of the Toll Highway in the "No-Build" analysis, but rather suggested to planners that they agree with the Turnpike Authority's assumption that the MUMPO's socio-economic forecasts could be used for a "No-Build" scenario. Each e-mail asked: "Based on your understanding of the socio-economic forecasting process that occurred from 2001-2004, would you agree with our assumption that these forecasts represent a future scenario without	See response to Comment #41 in this letter (i004).

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		the Monroe Connector."[137] The consultants assured the planners - many of whom had no personal knowledge of the creation of the TAZ data and many of whom were not in their current positions when the data was produced - that all other planners had agreed with the assumption.[138]	
43	Indirect and Cumulative Effects	While the NCTA reported favorable results from this round of "interviews," the results were in reality not conclusive. Despite the skewed questions, several planners could not confirm that the socio-economic forecasts had been applied in a reasonable manner, [139] and others who replied in the affirmative were the very same planners who earlier had stated they were unable to confirm such assumptions.[140]	See response to Comment #41 in this letter (i004).
44	Indirect and Cumulative Effects	Despite NCTA's continued assertions to the contrary, the interviews conducted with local planners do not confirm the appropriateness of using MUMPO's socio-economic projections to generate a ''No-Build" scenario. Rather, as conclusively found by the Court, the process was "patently inadequate." *N.C. Wildlife Fed'n,* 677 F.3d at 605 n.4. Moving forward, it is imperative the NCTA engage with local planners to present clear and honest "Build" and "No-Build" scenarios. Where local planners do not have sufficient knowledge or expertise to identify the appropriate use of socio-economic data, this fact should be indicated. Similarly, future interviews must provide local planners with sufficient information about the intended use for the data so that they are able to accurately determine the appropriateness of that use. Further, NCTA must insure that all appropriate local planners are contacted. As noted above, the failure to coordinate with the RRRPO during the previous NEPA process led to significant inadequacies in the analysis.	See responses to Comments #39 and 41 in this letter (i004).
45	Indirect and Cumulative Effects	Significant growth and development is anticipated to occur if the Monroe Connector/Bypass is constructed. However, little of this growth is accounted for in the "Build" scenario. In addition to revising the "No Build" scenario to ensure that it accurately reflects a future without the Monroe Connector/Bypass, NCTA must ensure that the "Build scenario" accounts for all the reasonably foreseeable future growth that will result from the Bypass. NCTA must clearly explain how the "Build" scenario is calculated, and how it takes into account all predicted future development that can be attributed to the Toll Highway.	It is difficult to determine what the commenter means by "significant growth and development" as commenter has never quantified the growth they feel is expected, and as such it is not appropriate to compare general statements such as "significant growth" to the actual quantified growth projected in the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). Section 4.2 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) documents how the No-Build and Build Scenarios were developed and Section 5 documents the expected induced development that would result from the Build Scenario and the indirect and cumulative impacts that would result from this induced growth. The report is

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			summarized in **Section 4.5** of the Draft Supplemental Final EIS.
46	Indirect and Cumulative Effects	As discussed above, the proposed Legacy Park is a reasonably foreseeable future development, and the EIS must consider the cumulative impacts of the Bypass and the business park in combination. Such an analysis would be required even were the Park not dependent on the Bypass. NEPA regulations require that agencies analyze the cumulative impacts of "past, present, and reasonably foreseeable future actions regardless of what agency ... or person undertakes such other actions."[142] In determining whether a project will have a "significant" impact on the environment, an agency must consider "[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts."[143] The Legacy Park development will necessarily have such an impact.	See response to Comment #12 in this letter (i004).
47	Indirect and Cumulative Effects	NCTA must also consider the cumulative impact of the Monroe Connector/Bypass and the proposed 601 Connector- a proposed new location four-lane divided road that would connect the Monroe Connector/Bypass and US 601 South. While we understand that the 601 Connector project may not proceed immediately, we ask NCTA to determine if there are still any plans for its construction. Statements from the Monroe City Council are that the project is "on hold," suggesting that it has not been abandoned but is planned for construction in the near future. If the intention is still to pursue the project, then NCTA must account for the cumulative impact of the Connector in its analysis of the Monroe Toll Road. We note that an early scoping exercise for the Monroe Connector/Bypass NEPA process included the possibility of pursuing a combined NEPA process for the 601 Connector, the Monroe Bypass and the Monroe Connector. The two projects are intimately connected and should not be pursued on a	The 601 Connector is not "planned for construction in the near future." There are no current plans to proceed with the 601 Connector project. It is not included in the MUMPO 2012-2018 Transportation Improvement Program, the 2014-2020 draft State Transportation Improvement Program, or the MUMPO 2035 Long Range Transportation Plan as a financially constrained project, even if the counties adopted a tax of 0.25 cent to fund additional transportation improvements. There are projects in the current NCDOT STIP (Project U-4024 and R-2616), that will widen existing US 601. These projects have been included in the quantitative indirect and cumulative effects analysis. CEQ defines a cumulative impact as: "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." As the 601 Bypass project is not included in current plans, NCDOT does not

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		piece-meal basis.	consider the project to be "reasonably foreseeable." NCDOT will revise this consideration if the project is included in future plans before completion of the Monroe Connector/Bypass EIS process.
48	Purpose and Need	In its recent presentation to federal and state resource agencies, NCTA has indicated a willingness to revisit the purpose and need for the Monroe Connector/Bypass. We urge the agency to take this step. As explained below, not only is the current statement extremely unclear, but recent developments call its very rationale into question. Once NCTA has clarified its purpose and need a full analysis of all reasonable alternatives can begin. Many residents of Union County, including local elected officials, believe that the purpose of the Monroe Connector/Bypass is to decrease congestion and improve mobility on existing U.S. 74. It is understandable that local community members could have reached this false conclusion. The stated purpose of improving "mobility in the U.S. 74 corridor within the project study area" gives the impression that the Toll Highway will improve U.S. 74 itself, rather than just provide a parallel (tolled) road in the corridor that will improve mobility. By contrast, NCTA has acknowledged in recent meetings that the proposed toll highway will not, in fact, improve congestion on U.S. 74. During a meeting of the U.S. 74 Corridor Revitalization stakeholders, NCTA representatives made clear that the Bypass was not planned with the idea to improve or address congestion issues on U.S. 74. That is not a stated purpose of the Bypass, nor is it an anticipated result of the Bypass; instead, the purpose is to create a high speed corridor in the region. This fact is not new. Traffic data in the EIS indicated that congestion on existing U.S. 74 would not be much improved with construction of the Bypass. Moving forward, NCTA must articulate and deliver a clear statement of purpose and need to the public, and be clear about the impact of constructing the road to existing U.S. 74.	The Draft Supplemental Final EIS includes an updated purpose and need section based on new information. As stated in the Draft EIS, Final EIS, and Draft Supplemental Final EIS, the purpose of the project is "to improve mobility and capacity within the project study area by providing a facility for the US 74 corridor from near I-485 in Mecklenburg County to between the towns of Wingate and Marshville in Union County that allows for high-speed regional travel consistent with the designations of the North Carolina SHC program and the North Carolina Intrastate System, while maintaining access to properties along existing US 74." As discussed in **Section 2.5.2** of the Draft Supplemental Final EIS, a comparison of future build and no-build traffic forecasts show that some traffic will divert to the Monroe Connector/Bypass and thus reduce congestion and improve traffic operations along existing US 74 compared to the no-build forecasts.
49	Traffic Forecasts	As we explained in our comment letters during the NEPA process and throughout the litigation, the alternatives analysis for the Monroe Connector/Bypass was based on a fundamentally flawed set of traffic forecasts. The forecasts for both "Build" and "No Build" scenarios were based on a single set of socio-economic data. This approach produced	NCDOT used the Metrolina Regional Model to conduct a sensitivity analysis of the raw model output using the MUMPO socioeconomic data set as one scenario and our induced growth forecasts added to MUMPO's data set as another scenario. Results of this analysis are presented in the Draft Supplemental Final EIS in **Section 2.5.2**.

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		"No Build" forecasts for U.S. 74 which were dramatically overstated, almost double the true forecast, because the model presented a situation in which the traffic generated by both the Toll Highway and existing U.S. 74 was squeezed onto U.S. 74 alone. As it moves forward with a new analysis of the Toll Highway, NCTA must create "Build" and "No Build'' scenarios based on two separate sets of socio-economic data- one which reflects a situation in which the Monroe Connector/Bypass is not constructed, and one which accounts for the tremendous amount of growth and development that is expected to result from the Toll Highway. These forecasts must be used as the basis upon which to compare different alternatives, and presented to the public for review and comment.	
50	Alternatives Analysis	Once accurate traffic forecasts have been constructed, and a coherent statement of purpose and need been set forth, NCTA must re-consider a full range of reasonable alternatives and combinations of alternatives. Since the ruling by the Fourth Circuit, and the new understanding by local communities that the Bypass will not improve U.S. 74, a range of lower- cost alternative solutions have been offered by local community members. We urge NCTA to consider these alternatives.	NCDOT and FHWA disagree with this comment. NCDOT evaluated the effects of induced growth potential on traffic and determined that there is a small relative difference in MUMPO's travel demand model outputs that would alter our previous traffic forecast. Additional evaluations after the Final EIS included additional analysis of upgrading existing US 74 as a superstreet and a 6-lane superstreet, and widening to a 6-lane arterial. The conclusion of this evaluation is that there are no conditions that warrant re-considering new alternatives or updating previous screening decisions. The NCDOT screening-level process and decisions in the EIS remain valid and they are reaffirmed in Draft Supplemental Final EIS, as described in **Section 2**. The commenter's statement that the Monroe Connector/Bypass will not improve US 74 is incorrect. As discussed in **Section 2.5.2** of the Draft Supplemental Final EIS, a comparison of future build and no-build traffic forecasts show that some traffic will divert to the Monroe Connector/Bypass and thus reduce congestion and improve traffic operations along existing US 74 compared to the no-build forecasts. The project also will provide a high-speed facility for the US 74 corridor that will operate at acceptable levels of service through 2035. NCDOT and FHWA are unaware of a new understanding by local communities that the Monroe Connector/Bypass will not improve US 74 counter to our engineering analysis. The commenter has not offered such evidence nor analysis to support the claim. The project is still a priority of the MPO.
51	Alternatives Analysis	As we have emphasized in previous comments, any new analysis by NCTA must give full consideration to upgrades to U.S. 74. As we noted in previous comment letters and during the litigation, NCTA commissioned	See response to Comment #50 in this letter (Letter i004).

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		a study in 2007 which showed that for less than $14 million in short-term and long-term traffic management solutions could yield dramatically reduced congestion and an acceptable level of service along the whole corridor in Union County, except for one interchange.	As discussed in **Section 2.4** of the Draft Supplemental Final EIS , numerous TSM measures have been implemented along existing US 74 by NCDOT as funds have become available and by developers of adjacent properties as they improve their properties. Overall, improvements have been implemented at all 23 intersections along existing US 74 that were mentioned for improvement in the *US 74 Corridor Study* (Stantec, 2007). As presented in **Section1.2.4**, existing average travel speeds along US 74 within the project corridor are less than 50 mph during peak travel periods, even with implementation of the TSM measures described in **Section 2.4**. TSM improvements, while providing some short-term benefits, would be overwhelmed by projected 2035 traffic in the corridor, and would not provide long-term benefit nor meet the purpose and need for the Monroe Connector/Bypass project.
52	Alternatives Analysis	Additionally, NCTA should also consider the value of improvements to other Union County roads that could provide alternative routes and thereby lessen traffic congestion on U.S. 74. We have included some examples below that should be considered. By improving Old Monroe Road, NCTA could provide local traffic with a proximate alternative to U.S. 74, allowing local residents the option to easily move through Monroe's core business district without getting stuck in U.S. 74's congestion Because Secrest Shortcut runs parallel to U.S. 74 along its northeastern side, improvements to the road could provide local drivers with another option to avoid getting stuck in traffic on U.S. 74. We also urge NCTA to consider improvements to NC 218. NC 218 begins at U.S. 74, east of Marshville, and connects with US 485 near Mint Hill. The route runs north of the proposed Bypass, but improvements to NC 218 could accomplish many of the same transportation goals as the Bypass and cost much less. Improving NC 218 would serve non-local traffic seeking a quick route through Union County that avoids the in-town congestion through Stallings, Indian Trail, Monroe, Wingate, and Marshville. At the same time, diverting through traffic that would otherwise rely on U.S. 74 could lessen the congestion on U.S. 74, returning 74 to primarily local use.	As summarized in **Section 2** of the Draft Supplemental Final EIS, a range of alternatives were considered for the project and reanalyzed as part of the Draft Supplemental Final EIS. Alternatives considered included upgrading existing roadways and combinations of upgrading existing roads with new location segments. Existing corridors considered for upgrading were US 74 (in its entirety or in part), Old Monroe Road/Old Charlotte Highway, and Secrest Shortcut Road and found to not to meet the project purpose and need. Upgrading NC 218 was not considered an option for this project, as it is outside the project study area and too far north to serve regional high speed travel from near I-485 to between Wingate and Marshville. NC 218 is within the Goose Creek basin, which has been identified as a habitat for the federally-endangered Carolina heelsplitter mussel. The selected alternative has no direct impact or indirect impact to the Goose Creek watershed. As documented in Section 2.3 of the Draft EIS, tolling has been identified by the regional transportation planning organization as the funding source for this project. State law prohibits tolling of existing roadways and requires a free alternate route. To accommodate this, constructing the project along an existing roadway corridor would require frontage roads to provide the free alternate route, which would require additional right of way along the existing facility.
53	Alternatives Analysis	In light of the recent interest CSX railway has shown in a new terminal at the proposed Legacy Park, we urge NCTA to reconsider freight rail as	Freight rail would not address the project purpose of improving mobility and capacity within the study area by providing a facility for the US 74 corridor that allows for high-speed regional travel. This conclusion was reviewed and is

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		part of a range of solutions to improve mobility in the corridor	reaffirmed. As discussed in **Section 4.5.3** of the Draft Supplemental Final EIS, Legacy Park was considered in the indirect and cumulative effects (ICE) analysis and update. The ICE study team investigated the proposed industrial park in eastern Union County, called Legacy Park. Based on interviews with Union County officials, CSX staff and researchers familiar with the proposal, the study team determined that the proposal was not reasonably foreseeable at this time and did not include any portion of the proposal in any future land use scenario.
54	Alternatives Analysis	In previous comment letters, we have also suggested that NCTA take a closer look at transit options in the corridor as part of a comprehensive solution to improving mobility. As with the freight options, NCTA rejected this solution without analysis.	This comment is not correct. The Mass Transit Alternative concept and the Multi-Modal Alternative concept were evaluated in the Draft EIS and reevaluated in the Final EIS. The Mass Transit Alternative and Multi-Modal Alternatives were eliminated from further study in the 1st Qualitative Screening due to their inability to meet elements of the project purpose and need. These alternatives would not noticeably improve mobility and capacity in the project study area, nor would they divert enough vehicular traffic. The Mass Transit Alternative is not consistent with the NC SHC program vision for the corridor or the NC Intrastate System, as it would not allow for high-speed freeway travel in the US 74 corridor. The Draft Supplemental Final EIS reaffirms this determination.
55	Alternatives Analysis	The viability of transit alternatives has been discussed at length in conjunction with the U.S. 74 Revitalization Study. As such, we urge NCTA to take these discussions under advisement and study the effect of encouraging greater transit ridership in Union County as a mechanism for managing congestion on U.S. 74.	The purpose of the *US 74 Revitalization Study* is to prepare a coordinated land use, urban design, economic development, and multi-modal transportation plan for the US 74 corridor in light of the possibility that development of the Monroe/Connector Bypass will provide new opportunities for redevelopment. The study is not meant to develop alternatives to the Monroe Connector/Bypass project, but rather to plan for the redevelopment opportunities created by the project. Based on interview notes from the *US 74 Revitalization Study*, rapid transit in Union County is not in the 2030 transit plan. The US 74 Revitalization Study identified a steady demand for buses, but current demand seems to be met and it is hard to predict when a service increase will be needed. The main benefit of transit is not time savings, but savings in gas and vehicle ownership and parking expenses. Furthermore, existing transit ridership is low. To put it in perspective, as presented in the US 74 Corridor Revitalization Study Existing Conditions Report (HNTB, March 2012), the 2011 annual transit ridership on CATS Union County Express (Route 74X), which uses the existing US 74 corridor, was 42,948. The average daily vehicles using US 74 is approximately the same. So there are about the same number of people driving US 74 in one day as there are people who use transit for an entire year.

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			As discussed in **Section 4.5.3** of the Draft Supplemental Final EIS, the US 74 Revitalization Study was considered in the ICE Update. Since the study is still draft and has not been adopted, and since the land use and other recommendations would result in minimal changes to the land use scenario results, the study team determined it was not reasonably foreseeable to incorporate the draft plan recommendations into any future land use scenario for the ICE update.
56	Alternatives Analysis	Given the lack of need for nine interchanges to meet the stated purpose and need for the toll highway, we urge NCTA to consider designs of the bypass with fewer exits. By reducing the number of exits, the road would become a "true bypass" and would offer less opportunity for sprawling development and associated environmental impact. Thus between different toll road alternatives, a design with fewer exits must be the "Least Environmentally Damaging Practicable Alternative" required by Section 404 of the Clean Water Act. 40 C.F.R. § 230.10(a).	The proposed locations of interchanges along the Preferred Alternative are consistent with those included in the MUMPO 2035 Long Range Transportation Plan (LRTP). Prior to the Final EIS, several interchanges, including Unionville-Indian Trail Road, Rocky River Road, and Forest Hills School Road were reviewed considering both traffic volumes, as well as potential toll revenue, to determine if they could be removed. These proposed interchanges were determined to be necessary to serve projected traffic demand in the design year 2035, as well as to support toll revenue bonds required to finance the project, however it was determined that the Forest Hills Road interchange could be a modified interchange that would have a smaller footprint or be removed altogether. The US Army Corps of Engineers (USACE) is and will continue to be a cooperating agency on this project. No concern regarding the number of interchanges has been expressed by USACE.
57	Traffic Forecasts	Despite its unshaking commitment to the Monroe Bypass as the best solution for Union County, NCTA has never presented a clear picture of the existing traffic patterns in the U.S. 74 corridor. For example, NCTA does not know what percentage of the traffic in the corridor is "local" versus the percentage of the traffic that is travelling through the corridor from end to end. This deficiency in NCTA's analysis is striking. Because the intent of the Bypass is to speed travel from one end of the corridor to another, knowledge about the percentage of traffic making that trip is tremendously important. Likewise, with regard to future traffic and congestion projections for existing U.S. 74, it is important to know how much local traffic will continue to use that roadway. The Bypass will not be helpful for travelers making local trips. Thus, if the majority of current trips are in fact local, there will be no benefit from the Bypass and little purpose for the Bypass. Similarly, NCTA has indicated that it does not have a good sense of how many trucks will use the bypass if it is constructed,[212] again making the need for and potential success of the Bypass unclear.	The MUMPO, the agency in charge of developing and implementing transportation projects of all modes for the region, continues to support the Monroe Connector/Bypass as an important element of the region's roadway network, as included in the 2035 Long Range Transportation Plan. Traffic forecasts used in the analyses summarized in the Draft Supplemental Final EIS were reviewed and determined valid for the purposes they were used (*Monroe Connector/Bypass Traffic Forecast Summary,* HNTB, November 2013). The final traffic and revenue study (*Final Report Proposed Monroe Connector/Bypass Comprehensive Traffic and Revenue Study*, Wilbur Smith and Associates, October 2010) concludes the project is financially feasible with tolls. Details about traffic patterns, mixes and volumes are provided in a response (October 24, 2012) to a letter from Stallings Mayor Lynda Paxton included in **Appendix C** of the Draft Supplemental Final EIS. No additional analyses are necessary.

Table A-4: Southern Environmental Law Center

Document: i004 Letter dated November 30, 2012

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
		NCTA's only attempt to look at this issue was in its analysis of future traffic and revenue projections. The analysis in that document is not encouraging. A survey conducted as part of the study indicated that over 50% of trips in the corridor began in either Monroe or Indian Trail, making the bypass an unlikely option. Furthermore, 28% of trips were from one place in Monroe to another place in Monroe, again a trip that will not be replaced by the Bypass. The survey indicated very little "through traffic," i.e. trips from one end of the Bypass to another. Before NCTA moves any further with this Bypass, it is essential that NCTA analyze who exactly is going to use the proposed Bypass. Only then can it perform a thorough analysis of different alternative solutions.	
58	Strategic Highway Corridor Designation	If the Monroe Connector/Bypass is constructed, however, the SHC designation will be moved from existing U.S. 74 to the Toll Highway. During the transportation stakeholders interviews conducted in the preparation of the U.S. 74 Revitalization Study, a NCDOT representative stated that the Bypass would take the SHC designation from U.S. 74. He noted that based on NCDOT's most recent map, U.S. 74 would lose its SHC designation from its intersection with the Bypass to the middle of Monroe. NCTA should study and explain the impact of removing this designation.	The current Strategic Highway Corridor (SHC) map for NCDOT Division 10 can be downloaded from https://connect.ncdot.gov/projects/planning/Pages/StrategicHighwayCorridors.aspx The Strategic Highway Corridors Map shows the Monroe Connector/Bypass as the designated Strategic Highway Corridor for US 74, not existing US 74. One of the needs to be addressed by the project is the inability of the existing US 74 corridor to serve high-speed regional travel consistent with the designations and goals of state and local transportation plans. The Strategic Highway Corridor Vision Plan for NCDOT Division 10 specifically recommends a freeway in the US 74 corridor between I-485 and Marshville to serve high-speed regional travel. The implementation strategy for the Strategic Highway Corridors recognizes that "critical to the success of attaining the vision for the corridors is the ability to limit access or impedances to these corridors such as driveways and traffic signals. Both items create conflicts on the facility, which compromise the level of mobility and safety along corridors."

Table A-4: Southern Environmental Law Center

Document: i004 Letter dated November 30, 2012

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
59	EIS Decision Making	Recent statements and actions make it clear that NCTA has already made its decision and does not intend to perform the new analysis required by the United States Court of Appeals to revisit that decision. Rather than revisit its analysis, NCTA intends only to "re-explain" its analysis and has no intention of revisiting its pre-determined conclusion that it will construct the Monroe Connector/Bypass.[220] This approach is a clear violation of the mandate that NEPA not be used to justify predetermined decisions. Further, despite the Fourth Circuit's requirement that the agencies revisit their analysis of the project and present that analysis to the public, there will be no true opportunity for the public to be involved in the decision making process because the agency has already determined that the project will proceed exactly as originally planned. NCTA's announced course of action has already been rejected by the Fourth Circuit. *N* C. *Wildlife Fed'n,* 677 F.3d at 600. In our briefs to the Court we explained that, for the severely flawed DEIS traffic forecasts, the Department's response was to "rig up" some forecasts "for the file" while concurrently proceeding ahead with finalizing the FEIS. There was no application in the FEIS, or otherwise, of the corrected forecasts to revisit the underlying conclusions and no analysis to show how these dramatically reduced forecasts might influence the selection of alternative transportation solutions. It appears that NCTA intends to repeat this course of action.	This comment is incorrect. NCDOT and FHWA reviewed all the information presented in the Final EIS, updated sections where new information has been made available, and provided new analyses for topics where reevaluation was deemed necessary as a result of new information, as summarized in the Draft Supplemental Final EIS. NCDOT has gone well beyond simply “re-explaining” its previous analysis and has provided and will continue to provide full opportunity for public involvement in the decision making process.

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APPENDIX A-2

COMMENTS ON THE FINAL EIS

Document Number	Agency/Organization	Date	Page Number
i005	Southern Environmental Law Center	06/25/10	A2-1
i006	Ed Eason	06/29/10	A2-20
a001	NC Department of Environment and Natural Resources (NCDENR)	07/16/10	A2-28
a002	NC Wildlife Resources Commission	07/13/10	A2-30
a003	NCDENR Division of Water Quality	06/28/10	A2-34
a004	NC Department of Cultural Resources State Historic Preservation Office	07/07/10	A2-38
a005	US Environmental Protection Agency – Region 4	07/12/10	A2-40
a006	NC Department of Crime Control and Public Safety Floodplain Management Program	07/09/10	A2-58

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SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450 | 200 WEST FRANKLIN STREET, SUITE 330 CHAPEL HILL, NC 27516-2559 | Facsimile 919-929-9421

June 25, 2010

Ms. Jennifer Harris
NC Turnpike Authority PBS&J
1578 Mail Service Center 5200
77 Center Drive, Suite 500
Raleigh, NC 27699-1578
(jennifer.harris@ncturnpike.org)
VIA US MAIL AND E-MAIL

Re: Monroe Connector/Bypass – Environmental Impact Statement Comments

Dear Ms. Harris:

On behalf of the Sierra Club Central Piedmont Group, Clean Air Carolina, the Yadkin Riverkeeper, and the North Carolina Wildlife Federation, the Southern Environmental Law Center ("SELC") offers the attached comments on the above-referenced Environmental Impact Statement prepared for the Monroe Connector/Bypass project ("the Toll Road") by the Federal Highway Administration and the North Carolina Turnpike Authority, a division of the North Carolina Department of Transportation (the "Transportation Agencies").

As you know, SELC submitted extensive comments on the draft EIS ("DEIS") in June of 2009. The Final EIS ("FEIS") cures almost none of the substantial omissions and misstatements of the earlier document. The FEIS includes new technical reports on air quality and water quality in the project area, but these reports incorporate the same false assumptions regarding land use and travel demand that appear in the DEIS, resulting in a similarly flawed analysis of how the Toll Road would impact public health, natural resources, and overall quality of life in the project area. These comments accordingly reiterate many of the concerns we expressed in our previous comments of June 2009.

1 Given the fundamental deficiencies of the FEIS, we respectfully request and recommend that your agencies not issue a record of decision based on this document but instead initiate a new environmental review process, with an adequate Draft EIS, which answers the many questions that remain about this project – its benefits, costs and environmental impacts – and whether other alternatives, including common-sense upgrades to US 74, would be preferable.

2 The FEIS does not meet the minimum criteria of NEPA or fulfill the dual purposes of an EIS: (1) to provide decisionmakers with enough information to aid in the substantive decision whether to proceed with a project in light of its environmental consequences; and (2) to provide the public with information and an opportunity to participate in gathering information. *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1056 (9th Cir. 1982) (the "form, content and preparation [of the EIS] foster both informed decision-making and informed public participation"); 40 C.F.R. § 1502.1 (purpose of EIS is to "provide full and fair discussion of significant environmental impacts and . . . [to] inform the decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts . . ."). Below, we address the main areas where the FEIS has failed to present an accurate portrayal of key issues in considering the proposed project.

Purpose and Need

3 As we indicated in our comments on the DEIS, the stated project purpose reduces to "build a freeway," which restates the specific project design rather than identifying an actual underlying purpose. Other comments lodged similar objections, pointing out that the use of "high speed" as part of the statement of purpose and need unduly narrows the available range of projects to a controlled access freeway rather than upgrades to existing US 74. In response, the FEIS states that "[t]he term 'high speed' on its own . . . does not unduly narrow alternatives nor preordain any one particular alternative," because "several different types of facilities . . . , for example; controlled-access freeways, Superstreets, or even public transportation on dedicated right of way," could facilitate "high-speed" travel at speeds of over 50 miles per hour (mph). (FEIS 3-7)

This response is unconvincing. The requirement of a "high-speed" facility serves little purpose other than to assure consistency with the North Carolina Turnpike Authority's narrow mandate under N.C. Gen. Stat. § 136-176(b)(2): "construction of the Monroe Connector/Bypass." The other conditions imposed on the project purpose, particularly consistency with the various corridor planning documents, preclude any serious consideration of public transportation or other alternatives to building a freeway. Indeed, the FEIS argues that "numerous local and state plans" support using the term "high speed" in the statement of purpose and need precisely because these plans refer to a "freeway," "which by definition is high speed." (FEIS 3-7) The Transportation Agencies have yet to justify in specific terms how a freeway advances the objectives of these various plans in a way that other alternatives cannot, particularly

4 targeted improvements to improve flow along the US 74 corridor. Nor does the FEIS include any data to support the various issues it identifies along US 74—congestion, lengthy commute times, high percentage of truck traffic—or how the Toll Road would address those needs.

5 The FEIS claims that the DEIS contains "supporting data on the needs to be addressed by the project." (App. B3-27). But the "data" supporting this project's purpose and need largely consist of inaccurate traffic forecasts. These forecasts of traffic volume in the corridor have played a prominent role both in defining the Toll Road's purpose and in evaluating how it compares with various alternatives. In our comments on the DEIS, we noted that the "No Build" traffic forecasts describe an implausibly dire situation, in which the future traffic volumes of both US 74 and the planned Toll Road must squeeze onto US 74 alone. This error resulted primarily from the use of the same socioeconomic forecasts for the project area under both the Build and No-Build scenarios. This error remains uncorrected and continues to distort the formulation of the statement of purpose and need for the Toll Road.

6 The FEIS concedes a significant error in the traffic forecasting presented in the DEIS, but it leaves many other erroneous forecasts in place and fails to revisit the analysis that these forecasts inform. In our comments on the DEIS, we pointed out that the 2030 No-Build traffic

6 projections cited in the statement of purpose and need predict traffic increases of "about 30 to 35 percent along the corridor from 2007 to 2030," even though these same traffic studies indicate that the existing conditions along the US 74 corridor "operate at an undesirable LOS E or F." (DEIS 1-20) We similarly questioned the plausibility of projections for the 2035 No-Build scenario, which estimate that traffic volumes will reach more than double the roadway capacity of various segments along US 74.

7 The FEIS now concedes in an appendix that the "2035 No-Build Alternative forecast was inadvertently overestimated," and it presents corrected estimates in a table. (FEIS A-3). In many cases, the prior forecasts are nearly double the revised traffic volumes. This substantial discrepancy indicates that the DEIS presented a skewed analysis of the need for additional highway capacity in the project area. Yet the Transportation Agencies have not revised their analysis of purpose and need, or any other part of the DEIS, maintaining that "other than corrections noted below for Table 2-7, all other conclusions and discussions remain valid." *Id.* This logic is flawed. Considering that the prior forecasts vastly overstate the traffic congestion likely to affect the US 74 corridor, and the corrected forecasts indicate that the Toll Road will cause a significant increase in vehicle miles traveled (VMT) in the region, both the need for this project, and the optimal means of meeting that need, must be revisited.

Analysis of Alternatives

A2-2

8 The FEIS continues to promote a flawed analysis of alternatives that unjustifiably omits serious consideration of a combination of feasible upgrades to US 74, access management, improved secondary road connectivity, and increased transit and freight rail in the project area. Such an alternative appears more effective than the Toll Road using virtually any measurable, objective criteria based on the needs of existing communities in the project area. Despite recognizing the various comments calling for consideration of such a combined strategy, however, the Transportation Agencies do little more than repeat the conclusory assertions of the DEIS.

9 In our previous comments, we pointed out that the Transportation Agencies ignored a study recently commissioned by NCDOT, the "Stantec Study," which showed that targeted upgrades along US 74 could greatly reduce congestion at a fraction of the Toll Road's cost to the public. To address this omission, the FEIS now includes a brief discussion of the Stantec study. But the FEIS dismisses the proposed upgrades because "these improvements would not result in high-speed travel through the corridor in 2015." (FEIS 3-14). In other words, upgrading US 74 would not meet the project purpose of building a freeway. The FEIS fails to explain, however, how upgrading US 74 would not address the underlying needs—i.e. congestion relief, reduced commute times, increased freight capacity, etc.—that building a freeway might remedy.

10 The FEIS also explains that "a comparison of the year 2015 traffic volumes used in the US 74 Corridor Study to the year 2035 No-Build volumes used in the Monroe Connector/Bypass Draft EIS, shows that the volumes in 2035 along US 74 would generally be more than double the 2015 traffic volumes." *Id.* This is a major flaw in the analysis. It appears to reference the grossly inflated traffic projects that are revised at Appendix A-3 ("DEIS Errata"). The revised

estimates of 2035 No-Build traffic volumes are less than double existing (2006) traffic volumes, and therefore far less than double the 2015 traffic volumes cited in the Stantec study.

11 In rejecting an alternative of combined upgrade and transit strategies, the FEIS fails to disclose information that is available, such as the $14 million price tag for the improvements detailed in the Stantec study. Instead, the FEIS includes an almost verbatim reproduction of the DEIS' discussion of "TSM measures, TDM alternatives, and Mass Transit/Multi-Modal alternatives," concluding "[c]ombining a Mass Transit Alternative concept with other modes also would not be practicable" because it "would add substantial costs to any alternative that includes road improvements, but would do very little to improve traffic flow on US 74." (3-15) Like the DEIS, the FEIS presents scant support for this conclusion. Moreover, considering that the Toll Road would siphon off $24 million from the Highway Trust Fund every year for the next 30 years, require the state to guarantee hundreds of millions of dollars of additional, highly speculative "toll revenue" debt, and force area drivers to pay hefty tolls for both the highway's construction and ongoing maintenance, the Transportation Agencies should clarify what is meant by "substantial costs."

Substantial Increases in Vehicle Miles Traveled (VMT)

12 Even though the FEIS includes new "No-Build" traffic forecasts that nearly halve previous estimates of traffic volume along US 74, it nevertheless maintains that estimates of VMT based on the previous, erroneous figures are still valid. According to the FEIS, "VMT experienced a slight decrease in the 'Build' Scenario" because the Toll Road is slightly straighter than US 74, and the "vehicles that were previously accessing US 74 from the north now have a shorter route to the Monroe Connector/Bypass." (3-18) This explanation sheds light on how a computer model could have erroneously predicted that building a 20-mile-long toll road to access a sparsely developed area on the metro fringe will reduce traffic volume. It does not, however, show that the modeling is even remotely accurate. In fact, it reveals the failure to consider the role of new highway capacity in generating additional travel. *See Mullin v. Skinner*, 756 F. Supp. 904, 921 (E.D.N.C. 1990) ("It is an irrefutable reality that the easier it is to get somewhere, the more people will be inspired to do so."); *Swain v. Brinegar*, 517 F.2d 766, 777 (7th Cir. 1974) ("[A]lmost any sponsor of a major four lane highway project can say with some assurance that if the highway is built it will be used," because such highways "create demands for travel and expansion by their very existence.").

13 The claim that the Toll Road will reduce VMT is inconsistent with the revised traffic volume estimates presented in the FEIS. Those projections indicate that traffic volumes would increase substantially under the Build scenario. For example, the revised DEIS Table 2-7 (Appendix A-3) estimates traffic on US 74 near Stallings Road for the 2035 No Build scenario at 86,300 vehicles per day (vpd). It estimates the combined traffic on US 74 and the Toll Road under the Build scenario at 135,600 (67,400 plus 48,200, respectively). Thus, according to the revised forecast, building the Toll Road would result in an increase of over 57% in traffic volume along the US 74 corridor, which could be expected to cause an overall VMT increase of similar magnitude. The claim that the Monroe Connector/Bypass will reduce VMT is based on the 2035 No-Build Alternative traffic forecasts, documented in *Traffic Forecast for TIP Projects*

13 *R-3329 and R-2559, Monroe Connector/Bypass* (Wilbur Smith Associates, September 2008), which the FEIS acknowledges to be erroneous.

The substantial increases in VMT that would result from this project have far-reaching implications for air quality, energy consumption, and overall quality of life in the Charlotte region. These impacts must be considered in a new Draft EIS. In order to be meaningful, the analysis of this project must rely on different land use forecasts to compare the build and no-build alternatives. In response to SELC's comments, the Transportation Agencies point to a new
14 consultant's study which renders a "quantitative analysis" of this project's secondary impacts. But the study's first "analytical assumption" states "[r]egional TAZ forecasts for 2030 households (i.e., number of dwelling units) and employment (i.e., number of jobs) served as the primary sources of data for developing the 2030 No Build land use estimate."[1] These TAZ forecasts are based on an assumption that the Toll Road will be built. The study thus uses forecasts of sprawl growth patterns, which would be facilitated by the Toll Road, to predict the impacts associated with not building the toll road. This does not satisfy NEPA. *See, e.g. Sierra Club v. United States DOT*, 962 F. Supp. 1037, 1043 (D. Ill. 1997) (rejecting an EIS that included "a socioeconomic forecast that assumes the construction of a highway such as the tollroad and then applies that forecast to both the build and no-build alternatives," resulting in "a self-fulfilling prophecy that makes a reasoned analysis of how different alternatives satisfy future needs impossible.").

Air Quality

A2-3

In our comments on the DEIS, we noted various deficiencies in the analysis of carbon monoxide, ozone, and mobile source air toxics (MSATs) related to this project. The FEIS fails to address these deficiencies. As explained above, the FEIS continues to falsely claim that the
15 Toll Road would reduce VMT in the project area, severely distorting the air quality analysis. Instead, the Transportation Agencies must fully consider and disclose the risks of localized pollution associated with the substantial traffic growth caused by this project. They must also disclose how the increased VMT and sprawl growth patterns facilitated by this project would exacerbate the area's smog problem.

The FEIS also claims that "[it] is technically infeasible to accurately model the negligible increases or decreases of carbon dioxide emissions at a project level," and that "the results of such an analysis would not be likely to inform decision-making at the project level, while adding considerable administrative burdens to the NEPA process." (FEIS 3-20). In fact, calculating the
16 tons of greenhouse gas (GHG) emissions that this project would create would require little more than an accurate traffic volume forecast and an estimate of average fuel efficiency standards for the overall vehicle fleet. Moreover, as recent federal regulations have requested that estimates of greenhouse gas emissions factor into cost-benefit analyses for transportation infrastructure projects,[2] the FEIS is inconsistent with current federal transportation project review practices.

[1] *Indirect and Cumulative Effects Quantitative Analysis* (Michael Baker Engineering, April 2010) at iii.
[2] *See, e.g.*, Notice of Funding Availability for Supplemental Discretionary Grants for Capital Investments in Surface Transportation Infrastructure Under the American Recovery and Reinvestment Act, 74 Fed. Reg. 28758 (June 17, 2009); U.S. Dept. of Transportation "Transportation's Role in Reducing U.S. Greenhouse Gas Emissions: Volume

Indirect and Cumulative Impacts

Our comments on the DEIS pointed out the contradiction between the agencies' claim that the Toll Road would reduce VMT, yet spur development primarily in the eastern-most section of the project study area. In general, we objected to the conclusory nature of the DEIS analysis, including its characterization of areas surrounding endangered species habitat as
17 "almost completely developed." (DEIS 7-9) The FEIS now includes a new, quantitative report on indirect and cumulative effects, which similarly concludes that construction of the toll road and its many planned intersections would result in "no measurable difference in percent impervious cover" in the study area, and "no direct or indirect effects within the Goose Creek or Sixmile Creek watersheds."[3] The analysis in these reports, like that of the DEIS, is flawed.

As indicated above, the FEIS quantitative analysis report inflates estimates of cumulative and indirect effects under the No-Build scenario because it adopts the same baseline socioeconomic forecasts that were developed to predict traffic under the Build scenario. Internal inconsistencies in the FEIS attest to the faulty logic of this analysis. For example, the FEIS
18 "Qualitative Indirect and Cumulative Effects Assessment" reports that population in the easternmost areas of the project area "could actually decline" if the Toll Road is not built. The FEIS quantitative analysis report, however, assumes that development and development-related impacts will continue to proceed in these areas even without the Toll Road.[4] Again, this is because, as the report explains, "[f]uture development was largely calculated based on growth in households and employment as predicted in the MUMPO TAZ forecasts . . ."[5] And these forecasts assume that growth will be facilitated by various road improvements, including the Monroe Connector/Bypass. Not surprisingly, the analysis based on these assumptions yields a finding that "the vast majority of indirect development occurring in the Study Area by 2030 will occur with or without the Monroe Connector/Bypass project."[6]

The failure of the FEIS to address mitigation measures adequately further warrants a new Draft EIS. The FEIS includes a lengthy citation to the Council on Environmental Quality (CEQ) "NEPA 40 Frequently Asked Questions," which clarifies that the agencies must identify "all relevant, reasonable mitigation measures . . . even if they are outside the jurisdiction of the lead
19 agency," and discuss "the probability of the mitigation measures being implemented."[7] (FEIS 3-21) Following this citation, one would expect a discussion of measures that other state agencies and local municipalities have taken and may take in the future to mitigate development-related impacts, such as stormwater runoff. The discussion might identify, for example, the likelihood that existing measures in the Goose Creek site-specific management plan will remain in place,

1, Synthesis Report" (April 2010) *available at* http://ntl.bts.gov/lib/32000/32700/32779/DOT_Climate_Change_Report_-_April_2010_-_Volume_1_and_2.pdf.
[3] *Indirect and Cumulative Effects Quantitative Analysis* (Michael Baker Engineering, April 2010) at 49.
[4] *See, e.g., id.* at 27, Table 13 (depicting significant increase in impervious surface cover within various watersheds in easternmost section of study area under No-Build scenario, e.g. 4% increase predicted within Salem Creek and Richardson Creek watersheds).
[5] *Id.* at 12.
[6] *Id.* at v.
[7] NEPA 40 Frequently Asked Questions, Question 19b.

and the likelihood of new measures taking place, such as stormwater retrofit programs to mitigate impacts associated with existing development.

20 The FEIS, however, fails to identify a single mitigation measure in the current affected area. And it fails to discuss the probability of state or local agencies implementing or continuing to implement current or potential measures, instead asserting that it is not necessary to discuss mitigation because there is "little difference" between the Build and No-Build scenarios. This conclusion, in turn, is based on the quantitative analysis of indirect and cumulative impacts, which explains that "it is assumed that mitigation requirements would offset any impacts" resulting from exemptions to stream buffer rules.[8] In other words, because the FEIS assumes that effective mitigation measures will be implemented, there is little difference between the Build and No-Build scenarios, and thus no need to discuss whether effective mitigation measures will in fact be implemented.

21 Various other assumptions in the FEIS analysis of indirect and cumulative impacts deserve reconsideration. With scant support, the FEIS assumes that development would concentrate around the intersections of the Toll Road to such an extent that higher density development patterns would result in a reduction of forest fragmentation compared to the No Build scenario.[9] This claim strains credulity. One need look no further than the project area itself, and the pervasive low-density development spurred by I-485, to discredit this farfetched theory. Similarly, the FEIS's assumptions that the various local zoning and land use restrictions will remain static[10] despite development pressures is "so utterly devoid of common sense and inconsistent with NEPA that it cannot be taken seriously." Mullin v. Skinner, 756 F. Supp. 904, 921 (E.D.N.C. 1990).

A2-4

Water Quality and Endangered Species

22 The FEIS fails to address the concerns we raised in our comments on the DEIS regarding the induced growth impacts of this project on water quality and endangered species habitat. Although the FEIS includes quantitative analyses of these impacts, the flawed nature of these analyses confounds any precise assessment of the Toll Road's real impacts for reasons discussed above. The Indirect and Cumulative Effects Quantitative Analysis and Water Quality Analysis conclude that the impervious surface increases, streamflow, runoff, and pollutant loadings of 2030 No-Build and 2030 RPA scenarios are equal. Again, such a result is not surprising given that both scenarios assume that major new highway capacity, including this project, will be built in the area and will result in sprawl growth patterns throughout the area. The FEIS interprets the similarity between the Build and No-Build scenario to signify that the Toll Road will not result in any adverse effects on water quality generally or to the Carolina heelsplitter's habitat specifically. But if anything, the pollution increases depicted in the modeling confirm that this

[8] *Quantitative Analysis*, *supra*, note 3, at 12.
[9] *See id.* at 50 ("the No-Build scenario findings show a 36 percent increase, while the Build Alternative findings show a 35 percent increase [in forest fragmentation] . . . This is a result of greater contiguous buildout (resulting in less fragmentation) in interchange areas.").
[10] *See id.* at 16 ("Distribution of induced development was determined based on capacity of available land, local plans, zoning and additional analysis.").

22 project would cause significant degradation, as it is a central feature of the growth characterized in both the Build and No-Build scenarios.

23 Indeed, keeping in mind that a true No-Build scenario is not presented in the FEIS, the analysis makes clear that the Toll Road would result in indirect and cumulative impacts to water quality and endangered species. For example, the baseline levels of impervious surfaces in two watersheds where the Carolina heelsplitter is found, Goose Creek and Sixmile Creek, are 13% and 25% respectively. The ICE Quantitative Analysis predicts impervious surfaces to increase in the Goose Creek watershed by 4% and in the Sixmile Creek watershed by 5% under both the 2030 No-Build and Build scenarios. Once again, since both scenarios are premised on the construction of major highway improvements, including the Toll Road, the modeling supports a conclusion that this project will contribute to impervious surface increases of 4% and 5% in the Goose Creek and Sixmile Creek watersheds respectively.

24 Using the findings from the ICE analyses, a biological assessment was prepared to determine the effects of the project on endangered species. However, in light of the flaws in those reports, the Biological Assessment ("BA") for this Project lacks sufficient information to justify the "May Affect, Not Likely to Adversely Affect" determination for the Carolina heelsplitter. The BA states that "the amount of imperviousness is expected to continue increasing" but that "these changes are independent of the project as there are no measurable changes in the level of imperviousness between build and no-build scenarios."[11] Again, this conclusion is unsupported because the 2030 No-Build and Build scenarios adopt the same baseline socioeconomic forecasts to predict impacts. And given that the modeling depicts increases in impervious surfaces in the Goose Creek and Sixmile Creek watersheds, an accurate assessment of the No-Build scenario could very well support a "May Affect, Likely to Adversely Affect" determination. Such a determination requires formal consultation with the United States Fish and Wildlife Service, and consideration of additional conservation measures, which may be required in designated watersheds.

25 The conservation measures proposed for the Goose Creek watershed and Carolina heelsplitter include funding of the USGS monitoring station at the US 601 crossing of Goose Creek and funding to the Carolina Heelsplitter Conservation Bank in Lancaster County, South Carolina.[12] We strongly support such measures, but more mitigation is warranted in the affected watersheds themselves. The BA notes that the baseline data indicate that the Goose Creek watershed is already above the imperviousness threshold at which habitat degradation begins to occur and seems to suggest that the watershed is a lost cause not worthy of additional conservation measures.[13] Because the Goose Creek watershed is designated critical habitat for the Carolina heelsplitter and identified as essential to recovery, measures must be implemented to begin restoring stream functions.

[11] Catena Group, *Biological Assessment of Carolina heelsplitter (Laxmigona decorata) and Designated Critical Habitat, Schweinitz's Sunflower (Helianthus schweinitzii), Michaux's Sumac (Rhus michauxii), and Smooth Coneflower (Echinacea laevigata)*, Monroe Bypass pg. 59 (May 25, 2010).
[12] *Id.* at 64.
[13] *See id.* at 63.

26 Although there is a site-specific management plan that mandates buffer widths and other measures to protect the Goose Creek watershed from new development pressures, additional improvements could be made by retrofitting existing development to upgrade stormwater control measures. Much of the imperviousness already existing in the Goose Creek watershed resulted from development induced by other highway projects such as I-485. Given that the transportation agencies are responsible for the extent of existing development in the watershed, these agencies should fund mitigation measures to improve conditions. If the Turnpike Authority funded a stormwater retrofit program that would both preserve and enhance the environmental baseline to a level equating to a protective imperviousness threshold below 6%,[14] the stream function could be significantly improved in Goose Creek.

In closing, the FEIS does not provide the basis needed for a rational appraisal of this project's costs, benefits, or alternatives. We urge you to issue a new Draft EIS that addresses the issues raised by these comments and the comments of others.

Thank you for your consideration.

Sincerely,

David F. Farren
Senior Attorney

Kay Bond
Staff Attorney

Thomas Gremillion
Associate Attorney

[14] The BA notes that studies support a threshold of 10% but that the resource agencies recommend 6%. A new study by the USGS that included a study location in North Carolina indicates that even 5% imperviousness corresponds to a change of 13-23% from background conditions. Coffney, Thomas, et al., *Responses of benthic macroinvertebrates to environmental changes associated with urbanization in nine metropolitan areas*, accepted for publication in Ecological Society of America Journal, available at http://pubs.usgs.gov/sir/2009/5049/pdf/Cuffney.pdf.

Table A-5: Southern Environmental Law Center

Document: i005 letter dated June 25, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	General	Given the fundamental deficiencies of the FEIS, we respectfully request and recommend that your agencies not issue a record of decision based on this document but instead initiate a new environmental review process, with an adequate Draft EIS, which answers the many questions that remain about this project - its benefits, costs and environmental impacts - and whether other alternatives, including common-sense upgrades to US 74, would be preferable.	A Draft Supplemental Final EIS has been prepared for the project. During the course of the analysis for this document, a review was conducted of the Draft EIS and Final EIS, as well as any new or updated information made available since these documents were published. The Draft Supplemental Final EIS provides updates to existing conditions, explains the reasons for selecting the Preferred Alternative, updates impact analyses for the Preferred Alternative, and summarizes additional studies performed, including additional analysis of upgrades to US 74.
2	General	The FEIS does not meet the minimum criteria of NEPA or fulfill the dual purposes of an EIS: (1) to provide decision makers with enough information to aid in the substantive decision whether to proceed with a project in light of its environmental consequences; and (2) to provide the public with information and an opportunity to participate in gathering information.	A Draft Supplemental Final EIS has been prepared for the project. Numerous public involvement opportunities were provided throughout the extent of this project. These opportunities are documented in Sections 1.4, 3.1 and 3.2 of the Final EIS and **Section 5** and **Appendix A** of the Draft Supplemental Final EIS. The Draft Supplemental Final EIS will be made available for public review and comment.
3	Purpose and Need	As we indicated in our comments on the DEIS, the stated project purpose reduces to "build a freeway," which restates the specific project design rather than identifying an actual underlying purpose. Other comments lodged similar objections, pointing out the use of "high speed" as part of the statement of purpose and need unduly narrows the available range of projects to a controlled access freeway rather than upgrades to existing US 74. In response, the FEIS states that "[t]he term 'high speed' on its own… does not unduly narrow alternatives nor preordain any one particular alternative," because "several different types of facilities…, for example; controlled-access freeways, Superstreets, or even public transportation on a dedicated right of way," could facilitate "high-speed" travel at speeds of over 50 miles per hour (mph). (FEIS 3-7) This response is unconvincing.	The term "high speed" in relation to this project is defined as 50 mph and is supported by numerous local and state plans, including the MUMPO *2035 LRTP*, the NC Intrastate System (NC General Statutes 136-178), and the NCDOT Strategic Highway Corridor initiative; as described in detail in Section 1 of the Draft EIS and *Final Statement of Purpose and Need for the Monroe Connector/Bypass* (PBS&J February 2008) which is incorporated into the Final EIS by reference. The previous response to this comment, which is included in Section 3.3.1 of the Final EIS, is still valid.
4	Purpose and Need	The Transportation Agencies have yet to justify in specific terms how a freeway advances the objectives of these various plans in a way that other alternatives cannot, particularly targeted improvements to improve flow along the US 74 corridor. Nor does the FEIS include any data to support the various issues it identifies along US 74 - congestion, lengthy commute times, high percentage of truck traffic - or how the Toll Road would address those needs.	The purpose of the project is clearly stated in the Draft EIS, Final EIS, and this Draft Supplemental Final EIS. Supporting information has been updated in the Draft Supplemental Final EIS **Section 1**, and includes data on social and economic conditions (**Section 1.2.2**), transportation and land use plans (**Section 1.2.3**), and existing and future roadway conditions and operations (**Section 1.2.4**). Based upon a review of the Draft EIS, Final EIS, new information, and public and agency comments received, the purpose and need for the project remains unchanged.

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COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
			Since the Final EIS, numerous improvements have been made to existing US 74, as described in **Section 2.4.** Many of these improvements implement the recommendations of the *US 74 Corridor Study* (Stantec, 2007). The *US 74 Corridor Travel Time Comparison* (HNTB, October 2013) details the existing travel time conditions on US 74 with these improvements in place. Based on travel time studies, existing US 74 has operating speeds of less than 50 mph. The ability of a controlled-access facility to meet the project's purpose and need is described in **Section 2.2.1** of the Draft Supplemental Final EIS. The controlled-access highway enhances mobility and increases capacity, serves high speed regional travel, is consistent with the NC Strategic Highway Corridor and NC Intrastate Systems, and maintains access to properties along existing US 74.
5	Purpose and Need	The FEIS claims that the DEIS contains "supporting data on the needs to be addressed by the project." (App. B3-27) But the "data" supporting this project's purpose and need largely consist of inaccurate traffic forecasts. Those forecasts of traffic volume in the corridor have played a prominent role both in defining the Toll Road's purpose and in evaluating how it compares with various alternatives. In our comments on the DEIS, we noted that the "No Build" traffic forecasts describe an implausibly dire situation, in which the future traffic volumes of both US 74 and the planned Toll Road must squeeze onto US 74 alone. This error resulted primarily from the use of the same socio-economic forecasts for the project area under both the Build and No-Build scenarios. This error remains uncorrected and continues to distort the formulation of the Statement of purpose and need for the Toll Road.	This issue is addressed in Appendix A, Page A-2 and A-3 of the Final EIS. See also response to Comment #6 in the Southern Environmental Law Center letter (i005). The statement that the erroneous 2035 No-Build traffic forecast "played a prominent role in defining the Toll Road's purpose and in evaluating how it compares with various alternatives" is incorrect. The incorrect 2035 No-Build traffic forecasts presented in Table 2-7 of the Draft EIS were not used in any subsequent analyses reported in the Draft EIS or Final EIS. The No-Build traffic forecasts were corrected in the *NCDOT STIP Project R-3329 & R-2559 Revised Monroe Connector/Bypass No-Build Traffic Forecast Memorandum* (HNTB, March 2010). A corrected Draft EIS Table 2-7 was published in Appendix A of the Final EIS, and upon review of the Draft EIS, it was determined that all other conclusions and discussions remain valid. The incorrect 2035 No-Build Alternative forecast was not used to document the purpose and need for the project, nor was it used in the development or analysis of alternatives. A summary of traffic forecasts developed during the project development process and how they were used is presented in **Section 2.5**. Traffic forecasts involve numerous steps and data sources, and the MRM regional model is just one of the many data sources used to create forecasts for the project. The forecasting error that generated the initially incorrect data in Table 2-7 of the Draft EIS was an inadvertent overestimation that occurred outside the MRM regional model and does not have any connection to the socioeconomic data used in the regional model. As part of the Draft Supplemental Final EIS, the various traffic forecasts prepared for the project were given an in-depth hard look considering new data and updated regional travel demand models. This review specifically evaluated how changes in socioeconomic data could affect the traffic forecasts for the project. Changes in the socioeconomic data due to potential induced growth from the Monroe Connector/Bypass would not

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			substantially or significantly alter the future Build scenario traffic forecasts for the project study area. The full review is presented in the *Monroe Connector/Bypass Traffic Forecast Summary* (HNTB, November 2013) and summarized in **Section 2.5.2** of the Draft Supplemental Final EIS.
6	Purpose and Need	The FEIS concedes a significant error in the traffic forecasting presented in the DEIS, but it leaves many other erroneous forecasts in place and fails to revisit the analysis that these forecasts inform. In our comments on the DEIS, we pointed out that the 2030 No-Build traffic projections cited in the statement of purpose and need predict traffic increases of "about 30 to 35 percent along the corridor from 2007 to 2030," even though these same traffic studies indicate that the existing conditions along the US 74 corridor "operate at an undesirable LOS E or F." (DEIS 1-20). We similarly questioned the plausibility of projections for the 2035 No-Build scenario, which estimates the traffic volumes will reach more than double the roadway capacity of various segments along US 74.	See response to Comment #5 in the Southern Environmental Law Center letter (i005). The statement that the Final EIS "leaves many other erroneous forecasts in place and fails to revisit the analysis that these forecasts inform" is incorrect. As presented in **Section 2.5.2** of the Draft Supplemental Final EIS and documented in the *Monroe Connector/Bypass Traffic Forecast Summary* (HNTB, November 2013), the current No-Build and Build traffic forecasts for the project were reviewed in light of new information and analyses since the Final EIS and were found to still be valid for the purposes they were used.
7	Purpose and Need	The FEIS now concedes in an appendix that the "2035 No-Build Alternative forecast was inadvertently overestimated and it presents corrected estimates in a table. (FEIS A-3). In many cases, the prior forecasts are nearly double the revised traffic volumes. This substantial discrepancy indicates that the DEIS presented a skewed analysis of the need for additional highway capacity in the project area. Yet the Transportation Agencies have not revised their analysis of purpose and need, or any other part of the DEIS, maintaining that "other than corrections noted below for Table 2-7, all other conclusions and discussions remain valid." *Id.* The logic is flawed.	See response to Comment #5 in the Southern Environmental Law Center letter (i005).
8	Analysis of Alternatives	The FEIS continues to promote a flawed analysis of alternatives that unjustifiably omits serious consideration of a combination of feasible upgrades to US 74, access management, improved secondary road connectivity, and increased transit and freight rail in the project area. Such an alternative appears more effective than the Toll Road using virtually any measurable, objective criteria based on the needs of existing communities in the project area.	The commenter does not provide any data or analyses to support the assertions made in this comment, and neither FHWA nor NCDOT is aware of any data or analysis that supports these assertions. As documented in **Section 2** of the Draft Supplemental Final EIS, a range of alternatives were rigorously considered for the project, including mass transit, upgrading existing roadways and combinations of upgrading existing roads with new location segments, and multi-modal alternatives. Existing corridors considered for upgrading were US 74 (in its entirety or in part), Old Monroe Road/Old Charlotte Highway, and Secrest Shortcut Road. These alternatives were found to not to meet the project purpose and need, as

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COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
			reaffirmed in this Draft Supplemental Final EIS. It should also be noted that the region's 2035 Long Range Transportation Plan considers all transportation modes, including transit and freight movement, along with roadway improvements, in a comprehensive transportation plan for the area. The MUMPO, the agency in charge of developing and implementing transportation projects of all modes for the region, continues to support the Monroe Connector/Bypass as an important element of the region's roadway network, as included in the 2035 Long Range Transportation Plan.
9	Analysis of Alternatives	In our previous comments, we pointed out that the Transportation Agencies ignored a study recently commissioned by NCDOT, the "Stantec Study," which showed that targeted upgrades along US 74 could greatly reduce congestion at a fraction of the Toll Road's cost to the public. To address this omission, the FEIS now includes a brief discussion of the Stantec study. But the FEIS dismisses the proposed upgrades because "these improvements would not result in high-speed travel through the corridor in 2015." (FEIS 3-14). In other words, upgrading US 74 would not meet the project purpose of building a freeway. The FEIS fails to explain, however, how upgrading US 74 would not address the underlying needs – i.e. congestion relief, reduced commute times, increased freight capacity, etc. - that building a freeway might remedy.	See response to Comment #4 in the Southern Environmental Law Center letter (i005). As discussed in **Section 2.4** of the Draft Supplemental Final EIS , numerous TSM measures have been implemented along existing US 74 by NCDOT as funds have become available and by developers of adjacent properties as they improve their properties. Overall, improvements have been implemented at all 23 intersections along existing US 74 that were mentioned for improvement in the *US 74 Corridor Study*. As presented in **Section1.2.4**, existing average travel speeds along US 74 within the project corridor are less than 50 mph during peak travel periods, even with implementation of the TSM measures described in **Section 2.4**. TSM improvements, while providing some short-term benefits, would be overwhelmed by projected 2035 traffic in the corridor, and would not provide long-term benefit nor meet the purpose and need for the Monroe Connector/Bypass project. Also, the improvements recommended in the *US 74 Corridor Study* (Stantec, 2007) were not intended as a replacement of the Bypass, but rather a "stop gap" measure until the Bypass could be built. As stated in the Executive Summary of the *US 74 Corridor Study*: *This study was a direct result of continued delays to the Monroe Bypass project (TIP #R-2559)…* *These delays have resulted in the immediate need to address traffic operational issues along the highly congested US 74 corridor with the goal to improve safety and efficiency of the existing roadway infrastructure <u>until construction of the Monroe Bypass can begin</u>. Without any improvements, US 74 will be operating at an unacceptable LOS at most signalized intersections by year 2015.* It is clear that the purpose of the *US 74 Corridor Study* was to provide recommendations for interim and immediate actions until such time as the Monroe Bypass was constructed.

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			In addition, various scenarios for improving existing US 74 have been evaluated in the EIS process. These are discussed in Section 2.4 of the Draft EIS, Section 3.3 of the Final EIS, and **Section 2.4** of the Draft Supplemental Final EIS. None of these alternatives were advanced as Detailed Study Alternatives, because they did not meet the purpose and need and/or they were determined not to be reasonable or practicable.
10	Analysis of Alternatives	The FEIS also explains that "a comparison of the year 2015 traffic volumes used in the US 74 Corridor Study to the year 2035 No-Build volumes used in the Monroe Connector/Bypass Draft EIS, shows that the volumes in 2035 along US 74 would generally be more than double the 2015 traffic volumes." *Id.* This is a major flaw in the analysis.	See response to Comment #5 in the Southern Environmental Law Center letter (i005).
11	Analysis of Alternatives	In rejecting an alternative of combined upgrade and transit strategies, the FEIS fails to disclose information that is available, such as the $14 million price tag for the improvements detailed in the Stantec study. Instead, the FEIS includes an almost verbatim reproduction of the DEIS' discussion of "TSM measures, TDM alternatives, and Mass Transit/Multi-Modal alternatives," concluding "[c]ombining a Mass Transit Alternative concept with other modes also would not be practicable" because it "would add substantial costs to any alternative that includes road improvements, but would do very little to improve traffic flow on US 74." (3-15) Like the DEIS, the FEIS presents scant support for this conclusion. Moreover, considering that the Toll Road would siphon off $24 million from the Highway Trust Fund every year for the next 30 years, require the state to guarantee hundreds of millions of dollars of additional, highly speculative "toll revenue" debt, and force area drivers to pay hefty tolls for both the highway's construction and ongoing maintenance, the Transportation Agencies should clarify what is meant by "substantial costs."	As discussed in **Section 2.2.1** and **Section 2.3** of the Draft Supplemental Final EIS, the Mass Transit Alternative was eliminated not for cost, but because it would not meet the project's purpose and need, as it would not provide for high-speed regional travel or be consistent with the Strategic Highway Corridor program vision for the US 74 corridor. See also response to Comment #9 in the Southern Environmental Law Center letter (i005).
12	Travel Demand Model	Even though the FEIS includes new "No-Build" traffic forecasts that nearly halve previous estimates of traffic volume along US 74, it nevertheless maintains that estimates of VMT based on the previous, erroneous figures are still valid. According to the FEIS, "VMT experienced a slight decrease in the 'Build' Scenario" because the Toll Road is slightly straighter than US 74, and the 'vehicles that were previously accessing US 74 from the north now have a shorter route	VMT (vehicle miles traveled) is a direct output from the Metrolina Regional Model (MRM) for a region or area, not a specific roadway. The forecasting error that generated the initially incorrect 2035 No-Build Scenario data in Draft EIS Table 2-7 was an inadvertent overestimation that occurred in a step in the forecasting process that was outside the MRM regional model, and the error does not have a connection to VMT output from the regional model. See response to Comment #5 in the Southern Environmental Law Center letter (i005).

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		to the Monroe Connector/Bypass." (3-18). This explanation sheds light on how a computer model could have erroneously predicted that building a 20-mile long toll road to access a sparsely developed area on the metro fringe will reduce traffic volume. It does not, however, show that the modeling is even remotely accurate. In fact, it reveals the failure to consider the role of new highway capacity in generating additional travel.	**Section 2.5.** of the Draft Supplemental Final EIS provides a summary of the travel demand modeling conducted for the project.
13	Travel Demand Model	The claim that the Toll Road will reduce VMT is inconsistent with the revised traffic volume estimates presented in the FEIS. Those projections indicate that traffic volumes would increase substantially under the Build scenario. For example, the revised DEIS Table 2-7 (Appendix A-3) estimates traffic on US 74 near Stallings Road for the 2035 No Build scenario at 86,300 vehicles per day (vpd). It estimates the combined traffic on US 74 and the Toll Road under the Build scenario at 135,600 (67,400 plus 48,200, respectively), thus, according to the revised forecast, building the Toll Road would result in an increase of over 57% in traffic volume along the US 74 corridor, which could be expected to cause an overall VMT increase of similar magnitude. The claim that the Monroe Connector/Bypass will reduce VMT is based on the 2035 No-Build Alternative traffic forecasts, documented in *Traffic Forecast for TIP Projects R-329 and R-2559, Monroe Connector/Bypass* (Wilbur Smith Associates, September2008), which the FEIS acknowledges to be erroneous.	The statement that the VMT analysis is based on an erroneous 2035 No-Build Alternative traffic forecast is incorrect. The 2035 No-Build traffic forecast was not used in the VMT analysis. See response to Comment #12 in the Southern Environmental Law Center letter (i005). Further, it is incorrect to directly compare the No-Build traffic forecasted on US 74 to the sum of the Build traffic forecast on both US 74 and the Monroe Connector/Bypass. This is because both facilities need to be considered as part of the larger network. For example, as traffic diverts from US 74 to the Monroe Connector/Bypass it opens capacity on US 74 to receive traffic from other competing facilities like Old Monroe Road (SR 1009). Due to the effect of traffic rebalancing based on different network conditions and capacity, VMT is an appropriate metric to compare differences in network configurations.
14	Travel Demand Model	The substantial increases in VMT that would result from this project have far-reaching implications for air quality, energy consumption, and overall quality of life in the Charlotte region. These impacts must be considered in a new Draft EIS. In order to be meaningful, the analysis of this project must rely on different land use forecasts to compare the build and no-build alternatives. In response to SELC's comments, the Transportation Agencies point to a new consultant's study which renders a "quantitative analysis" of this project's secondary impacts. But the study's first "analytical assumption" states "[r]egional TAZ forecasts for 2030 households (i.e., number of dwelling units) and employment (i.e., number of jobs) served as the primary sources of data for developing the 2030 No Build land use estimate." These TAZ forecasts are based on an assumption that the Toll Road will be built. The study uses forecasts of sprawl growth	NCDOT has undertaken a substantial review of the process used to develop the TAZ forecasts for Mecklenburg and Union Counties (see Section 4 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), for a complete discussion of this issue). This review demonstrated that the Monroe Connector/Bypass did not affect the forecast or allocation of households or employment in the Metrolina socioeconomic forecasts used in both the prior and updated ICE analyses. As part of the *Monroe Connector/Bypass Traffic Forecast Summary* (HNTB, November 2013), the impact to Build Scenario traffic forecasts and VMTs of changes in the socioeconomic data (SE) based on the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) were analyzed. The analysis concludes that the changes in SE data would have an approximate 3 percent increase in Union County VMT, and a zero percent change in VMT and VHT across the

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		patterns, which would be facilitated by the Toll Road, to predict the impacts associated with not building the toll road. This does not satisfy NEPA.	MRM network. These are not considered substantial increases. Regarding air quality, see response to Comment #15 in the Southern Environmental Law Center letter (i005).
15	Air Quality	In our comments on the DEIS, we noted various deficiencies in the analysis of carbon monoxide, ozone, and mobile source air toxics (MSATs) related to this project. The FEIS fails to address these deficiencies. As explained above, the FEIS continues to falsely claim that the Toll Road would reduce VMT in the project area, severely distorting the air quality analysis. Instead, the Transportation Agencies must fully consider and disclose the risks of localized pollution associated with the substantial traffic growth caused by this project. They must also disclose how the increased VMT and sprawl growth patterns facilitated by this project would exacerbate the area's smog problem.	As discussed in **Section 4.2.2** of the Draft Supplemental Final EIS, MUMPO'S *2035 LRTP* includes the proposed project as a toll facility consistent in design concept and scope with the Preferred Alternative. A conformity determination for carbon monoxide and ozone was issued by USDOT on May 29, 2013. As discussed in **Section 4.2.2** of the Draft Supplemental Final EIS, new MSAT guidance was issued on December 6, 2012. The qualitative MSAT analysis conducted for this project, as described in Appendix E of the Final EIS was reviewed and determined to still be valid. As a result of the qualitative MSAT analysis, it is expected there would be either minor changes or a slight reduction in MSAT emissions in the immediate area of the project, relative to the No-Build Alternative. In comparing the alternatives, MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. On a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today. Based on these findings, no MSAT mitigation is warranted.
16	Air Quality	The FEIS also claims that "[it] is technically infeasible to accurately model the negligible increases or decreases of carbon dioxide emissions at a project level," and that "the results of such an analysis would not be likely to inform decision-making at the project level, while adding considerable administrative burdens to the NEPA process." (FEIS 3-20). In fact, calculating the tons of greenhouse gas (GHG) emissions that this project would create would require little more than an accurate traffic volume forecast and an estimate of average fuel efficiency standards for the overall vehicle fleet. Moreover, as recent federal regulations have requested that estimates of greenhouse gas emissions factor into cost-benefit analyses for transportation infrastructure projects, the FEIS is inconsistent with current federal transportation project review practices.	There are no federal regulations requesting incorporation of estimates of greenhouse gas emissions from transportation infrastructure into benefit cost analysis. The commenter points to a notice of funding availability which outlines requirements for grant applicants for the TIGER Discretionary Grant Program under the American Recovery and Reinvestment Act. Estimating changes in greenhouse gas emissions resulting from construction of a highway facility is more complex than the commenter suggests. In addition to the traffic volume forecast of the new facility, and analysis would need to factor in changes in traffic in the entire affected project area, as well as changes in speeds. Climate change is an important national and global concern. However, under NEPA, detailed environmental analysis should be focused on issues that are significant and meaningful to decision-making. FHWA has concluded, based on the nature of GHG emissions and the exceedingly small potential climate change impacts of the proposed action, as discussed below, that the GHG emissions from the proposed action will not result in "reasonably foreseeable significant adverse impacts on the human

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			environment" (40 CFR 1502.22(b)). The GHG emissions from the project build alternatives will be insignificant, and will not play a meaningful role in a determination of the environmentally preferable alternative or the selection of the preferred alternative. More detailed information on GHG emissions "is not essential to a reasoned choice among reasonable alternatives" (40 CFR 1502.22(a)) or to making a decision in the best overall public interest based on a balanced consideration of transportation, economic, social, and environmental needs and impacts (23 CFR 771.105(b)). For these reasons, no alternatives-level GHG analysis has been performed for this project. To help address the global issue of climate change, USDOT is committed to reducing GHG emissions from vehicles traveling on our nation's highways. USDOT and EPA are working together to reduce these emissions by substantially improving vehicle efficiency and shifting toward lower carbon intensive fuels. The agencies have jointly established new, more stringent fuel economy and first ever GHG emissions standards for model year 2012-2016 cars and light trucks. The agencies have issued a notice to propose even more stringent standards for model year 2017-2025 vehicles, with an ultimate fuel economy standard of 54.5 miles per gallon for cars and light trucks by model year 2025. Further, on August 9, 2011, the agencies jointly proposed the first ever fuel economy and GHG emissions standards for heavy-duty trucks and buses.[1] Increasing use of technological innovations that can improve fuel economy, such as gasoline- and diesel-electric hybrid vehicles, will improve air quality and reduce CO_2 emissions future years. FHWA is engaged in developing strategies to reduce transportation's contribution to GHGs—particularly CO_2 emissions—and to assess the risks to transportation systems and services from climate change. In an effort to assist States and MPOs in performing GHG analyses, FHWA has developed a Handbook for Estimating Transportation GHG Emissions for Integration into the Planning Process. The Handbook presents methodologies reflecting good practices for the evaluation of GHG emissions at the transportation program level, and demonstrates how such evaluation may be integrated into the transportation planning process. FHWA also refined a web-based tool, The Energy and Emissions Reduction Policy Analysis Tool (EERPAT), for use at the statewide level to model a large number of GHG reduction scenarios and alternatives for use in transportation planning, climate action plans, scenario planning exercises, and in meeting state GHG reduction targets and goals. To assist states and MPOs in assessing climate change vulnerabilities to their transportation networks, FHWA has developed a climate change and extreme weather vulnerability and risk assessment framework.

[1] For more information on fuel economy proposals and standards, see the National Highway Traffic Safety Administration's Corporate Average Fuel Economy website: http://www.nhtsa.gov/fuel-economy/.

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			This document does not incorporate an analysis of the GHG emissions or climate change effects of each of the alternatives because the potential change in GHG emissions is very small in the context of the affected environment. Because of the insignificance of the GHG impacts, those impacts will not be meaningful to a decision on the environmentally preferable alternative or to a choice among alternatives. As outlined above, FHWA is working to develop strategies to reduce transportation's contribution to GHGs—particularly CO2 emissions—and to assess the risks to transportation systems and services from climate change. FHWA will continue to pursue these efforts as productive steps to address this important issue.
17	Indirect and Cumulative Impacts	Our comments on the DEIS pointed out the contradiction between the agencies' claim that the Toll Road would reduce VMT, yet spur development primarily in the eastern-most section of the project study area. In general, we objected to the conclusory nature of the DEIS analysis, including its characterization of areas surrounding endangered species habitat as "almost completely developed." (DEIS 7-9) The FEIS now includes a new, quantitative report on indirect and cumulative effects, which similarly concludes that construction of the Toll Road and its many planned intersections would result in "no measurable difference in percent impervious cover" in the study area, and "no direct or indirect effects within the Goose Creek or Sixmile Creek watersheds." The analysis in these reports, like that of the DEIS, is flawed.	The *Indirect and Cumulative Effects Quantitative Analysis* (Michael Baker Engineering, Inc., April 2010), summarized in Final EIS Section 2.5.5, and the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), summarized in **Section 4.5** of the Draft Supplemental Final EIS, were prepared in accordance with FHWA and NCDOT guidelines. Impervious cover and direct and indirect effects in Goose Creek and Sixmile Creek are addressed in the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). **Sections 4.5.4, 4.5.5.1, and 4.5.5.3** of the Draft Supplemental Final EIS summarize the analysis results relating to these topics.
18	Indirect and Cumulative Impacts	As indicated above, the FEIS quantitative analysis report inflates estimates of cumulative and indirect effects under the No-Build scenario because it adopts the same baseline socioeconomic forecasts that were developed to predict traffic under the Build scenario. Internal inconsistencies in the FEIS attest to the faulty logic of this analysis. For example, the FEIS "Qualitative Indirect and Cumulative Effects Assessment" reports that population in the easternmost areas of the project area "could actually decline" if the Toll Road is not built. The FEIS quantitative analysis report, however, assumes that development and development-related impacts will continue to proceed in these areas even without the Toll Road. Again, this is because, as the report explains, "[f]uture development was largely calculated based on growth in households and unemployment as predicted in the MUMPO TAZ forecasts…" And these forecasts assume that growth will be facilitated by various road	The statement that estimates of cumulative and indirect effects under the No-Build scenario are inflated is incorrect. See responses to Comments #6, #14 and #17 in the Southern Environmental Law Center letter (i005). The *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), summarized in **Section 4.5** of the Draft Supplemental Final EIS, updates the indirect and cumulative effects analysis for the Monroe Connector/Bypass project summarized in the Final EIS. As evaluated in detail in the ICE Update, it was determined that the MUMPO models did not incorporate the induced land use effects of the Monroe Connector/Bypass; therefore, it was appropriate to use the MUMPO socioeconomic projections, along with other information, to develop the No-Build Scenario used in the ICE analysis. As described in Section 4 of the ICE Update, the study team estimated the induced growth potential of the project and added that estimated induced growth to the No-Build Scenario to develop the Build Scenario, which represents future conditions with the project and its growth-inducing impacts. The study team elected to use a more conservative approach (i.e., assuming higher possible

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COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
		improvements, including the Monroe Connector/Bypass. Not surprisingly, the analysis based on these assumptions yields a finding that "the vast majority of indirect development occurring in the Study Area by 2030 will occur with or without the Monroe Connector/Bypass project."	cumulative effects across the entire study area) by choosing not to reallocate growth within the study area, but rather to add the estimated induced growth over and above the growth expected under the No-Build Scenario.
19	Indirect and Cumulative Impacts	The failure of the FEIS to address mitigation measures adequately further warrants a new Draft EIS. The FEIS includes a lengthy citation to the Council on Environmental Quality (CEQ) "NEPA 40 Frequently Asked Questions," which clarifies that the agencies must identify "all relevant, reasonable mitigation measures… even if they are outside the jurisdiction of the lead agency," and discuss "the probability of the mitigation measures being implemented." (FEIS 3-21) Following this citation, one would expect a discussion of measures that other state agencies and local municipalities have taken and may take in the future to mitigate development-related impacts, such as stormwater runoff. The discussion might identify, for example, the likelihood that existing measures in the Goose Creek site-specific management plan will remain in place, and the likelihood of new measures taking place, such as stormwater retrofit programs to mitigate impacts associated with existing development.	Potential measures to minimize indirect and cumulative effects are discussed in Section 6 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), and summarized in **Section 4.5.6** of the Draft Supplemental Final EIS.
20	Indirect and Cumulative Impacts	The FEIS, however, fails to identify a single mitigation measure in the current affected area. And it fails to discuss the probability of state or local agencies implementing or continuing to implement current or potential measures, instead asserting that it is not necessary to discuss mitigation because there is "little difference" between the Build and No-Build scenarios. This conclusion, in turn, is based on the quantitative analysis of indirect and cumulative impacts, which explains that "it is assumed that mitigation requirements would offset any impacts" resulting from exemptions to stream buffer rules. In other words, because the FEIS assumes that effective mitigation measures will be implemented, there is little difference between the Build and No-Build scenarios, and thus no need to discuss whether effective mitigation measures will in fact be implemented.	See response to Comment #19 in the Southern Environmental Law Center letter (i005).

Table A-5: Southern Environmental Law Center

Document: i005 letter dated June 25, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
21	Indirect and Cumulative Impacts	Various other assumptions in the FEIS analysis of indirect and cumulative impacts deserve reconsideration. With scant support, the FEIS assumes that development would concentrate around the intersections of the Toll Road to such an extent that higher density development patterns would result in a reduction of forest fragmentation compared to the No Build scenario. This claim strains credulity. One need look no further than the project area itself, and the pervasive of low-density development spurred by 1-485, to discredit this farfetched theory. Similarly, the FEIS's assumptions that the various local zoning and land use restrictions will remain static despite development pressures is "so utterly devoid of common sense and inconsistent with NEPA that it cannot be taken seriously." Mullin v. Skinner, 756 F. Supp. 904, 921 (E.D.N.C. 1990).	Forest fragmentation impacts are summarized in **Section 4.5.5.5** of the Draft Supplemental Final EIS and discussed in detail in Section 5.7 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). The analysis concluded that most habitat fragmentation in the project area will occur with or without the proposed project. The results indicate that indirect impacts are generally small to negligible while the cumulative results vary from small to substantial. However, the cumulative impacts are likely to occur with or without the proposed project. The matter in Mullin v. Skinner (1990) is distinguishable from this project. In Mullin the agencies prepared a 43 page Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the construction of a high-rise bridge to Sunset Beach. In the EA, the agencies concluded without analysis that the bridge was "not expected to cause significant alterations in land use, development pressures, or traffic volumes." Mullin at 910. The agencies stated that "significant changes in development patterns can be brought about only through zoning changes enacted by local officials, not by the building of a bridge by NCDOT." Id. at 915. It was this conclusion that the Court held was "so utterly devoid of common sense and inconsistent with NEPA that it cannot be taken seriously." It was not assumed that zoning and land use restrictions would remain static, rather modifications were made to future land use scenarios based on interviews and documents provided by local planners. As documented in Section 1.6 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), a review and assessment of local land use conditions and land use regulations was completed, along with interviews with local planners, to gain an understanding of existing land use and applicable land use ordinances and regulations. This information was used in the development of future land use scenarios. Detailed methodology regarding future land use scenarios can be found in Section 4.2 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). As stated in Section 6 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), "…one should note that the assumptions used in the methodology of this report and the reports summarized herein were generally designed to overestimate impacts to sensitive resources and water quality. For example, the water quality analysis assumed that relevant stream buffer regulations would be maintained through the design year of the project, but did not apply other land use or zoning controls that are currently in place or may be adopted in the future." Therefore, the commenter's statement that zoning and land use restrictions

Table A-5: Southern Environmental Law Center

Document: i005 letter dated June 25, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
			were assumed to remain static is incorrect. While NCDOT does not have the authority to regulate land use, as stated in Section 6 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), the North Carolina Wildlife Resources Commission (NCWRC) has developed the Green Growth Toolbox (NCWRC, 2012) to promote "nature friendly" land use practices. The ICE Update did not assume such practices would be used where not already adopted to ensure a conservative analysis, but in interviews with area planners, respondents stated that they would consider aspects of the Toolbox approach as appropriate, and NCDOT encourages local governments in the project area to consider the Toolbox (Draft Supplemental Final EIS **Section 4.5.6**).
22	Water Quality and Endangered Species	The FEIS fails to address the concerns we raised in our comments on the DEIS regarding the induced growth impacts of this project on water quality and endangered species habitat. Although the FEIS include quantitative analyses of these impacts, the flawed nature of these analyses confounds any precise assessment of the Toll Road's real impacts for reasons discussed above. The Indirect and Cumulative Effects Quantitative Analysis and Water Quality Analysis conclude that the impervious surface increases, streamflow, runoff, and pollutant loadings of 2030 No-Build and 2030 RPA scenarios are equal. Again, such a result is not surprising given that both scenarios assume that major new highway capacity, including this project, will be built in the area and will result in sprawl growth patterns throughout the area. The FEIS interprets the similarity between the Build and No-Build scenario to signify that the Toll Road will not result in any adverse effects on water quality generally or to the Carolina heelsplitter's habit specifically. But if anything, the pollution increases depicted in the modeling confirm that this project would cause significant degradation, as it is a central feature of the growth characterized in both the Build and No-Build scenarios.	See response to Comment #17 in the Southern Environmental Law Center letter (i005). In addition, in response to ongoing coordination with the USFWS, the *Technical Report on Direct, Indirect and Cumulative Impacts to Federally Listed Species* (Michael Baker Engineering, Inc., October 2013) provides an updated analysis of potential direct, indirect and cumulative effects to federally listed species (including the Carolina heelsplitter) associated with the proposed project. As presented in **Section 4.4.5** of the Draft Supplemental Final EIS, a new Biological Assessment was submitted to USFWS in October 2013 and the biological conclusions were consistent with those presented in the Final EIS and the *Biological Assessment for the Monroe Connector-Bypass Project (R-3329/R-2559)* (The Catena Group, May 2010). NCDOT and FHWA are currently working with USFWS to reach concurrence on the biological conclusions presented in the new (October 2013) *Biological Assessment*. USFWS consultation will be complete prior to issuance of the Combined Final Supplemental Final EIS/ROD.
23	Water Quality and Endangered Species	Indeed, keeping in mind that a true No-Build scenario is not presented in the FEIS, the analysis makes clear that the Toll Road would result in indirect and cumulative impacts to water quality and endangered species.	See responses to Comments #6, #14, #17, and #22 in the Southern Environmental Law Center letter (i005).

Table A-5: Southern Environmental Law Center

Document: i005 letter dated June 25, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
24	Water Quality and Endangered Species	Using the findings from the ICE analyses, a biological assessment was prepared to determine the effects of the project on endangered species. However, in light of the flaws in those reports, the Biological Assessment ("BA"') for this Project lacks sufficient information to justify the "May Affect, Not Likely to Adversely Affect" determination for the Carolina heelsplitter. The BA states that "the amount of imperviousness is expected to continue increasing" but that "these changes are independent of the project as there are no measurable changes in the level of imperviousness between build and no-build scenarios." Again, this conclusion is unsupported because the 2030 No-Build and Build scenarios adopt the same baseline socioeconomic forecasts to predict impacts. And given that the modeling depicts increases in impervious surfaces in the Goose Creek and Sixmile Creek watersheds, an accurate assessment of the No-Build scenario could very well support a "May Affect, Likely to Adversely Affect" determination. Such a determination requires formal consultation with the United States Fish and Wildlife Service, and consideration of additional conservation measures, which may be required in designated watersheds.	See response to Comment #22 in the Southern Environmental Law Center letter (i005).
25	Water Quality and Endangered Species	The conservation measures proposed for the Goose Creek watershed and Carolina heelsplitter include funding of the USGS monitoring station at the US 601 crossing of Goose Creek and funding of the Carolina Heelsplitter Conservation Bank in Lancaster County, South Carolina. We strongly support such measures, but more mitigation is warranted in the affected watersheds themselves. The BA notes that the baseline data indicate that the Goose Creek watershed is already above the imperviousness threshold at which habitat degradation begins to occur and seems to suggest that the watershed is a lost cause not worthy of additional conservation measures. Because the Goose Creek watershed is designated critical habitat for the Carolina heelsplitter and identified as essential to recovery, measures must be implemented to begin restoring stream functions.	The commenter is incorrect. The purpose of including the statements regarding the exceeding of the imperviousness threshold is simply to convey the existing conditions (Environmental Baseline) of the watershed, and in **no way** should be taken to imply that the watershed is a "lost cause". As the Endangered Species Act Section 7 Consultation guidance indicates, the Environmental Baseline is an essential component of a BA, and the "Best Available Scientific and Commercial Data" is to be used when preparing a BA, the threshold level that was highlighted is what is currently accepted by the scientific community as being needed to sustain populations of sensitive aquatic species. Failing to point out that both Goose Creek and Sixmile Creek currently exceed the imperviousness threshold would be a misrepresentation of the Environmental Baseline. In addition, see response to Comment #22 in the Southern Environmental Law Center letter (i005).
26	Water Quality and Endangered Species	Although there is a site-specific management plan that mandates buffer widths and other measures to protect the Goose Creek watershed from new development pressures, additional improvements could be made by retrofitting existing development to	NCDOT and FHWA will continue to coordinate with USACE and NCDWQ to determine appropriate mitigation requirements through the permitting process. Compensatory mitigation is planned to be provided through the NC EEP in-lieu fee program. In addition, the NCDOT and FHWA will implement BMPs in accordance with the NCDOT's *Design*

Table A-5: Southern Environmental Law Center

Document: i005 letter dated June 25, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
		upgrade storm water control measures. Much of the imperviousness already existing in the Goose Creek watershed resulted from development induced by other highway projects such as I-485. Given that the transportation agencies are responsible for the extent of existing development in the watershed, these agencies should fund mitigation measures to improve conditions. If the Turnpike Authority funded a stormwater retrofit program that would both preserve and enhance the environmental baseline to a level equating to a protective imperviousness threshold below 6%, the stream function could be significantly improved in Goose Creek.	*Standards in Sensitive Watersheds* to minimize water quality impacts where applicable. It should be noted that the Monroe Connector/Bypass avoids any direct impacts to Goose Creek, and no indirect or cumulative impacts to Goose Creek are anticipated as a result of this project. Also, see response to Comment #19 in the Southern Environmental Law Center letter (i005).

Ms. Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578

Re: Questions & comments regarding the FEIS for the Monroe Connector/Bypass STIP R-3329 & R-2559

1 The EPA is set to finalize the 2008 reconsidered 8 hour Ozone NAAQS on August 31, 2011, which is anticipated to range from 0.060 – 0.070 parts per million (ppm). How can the Charlotte Metro area possibly meet this standard in the future with the construction of this facility, and others, proposed in the area? This additional road construction will certainly increase the vehicle miles traveled, and additional ozone pre-cursors (NOx and VOC) to an area that has shown difficulty maintaining the 1997 8- hour Ozone standard at 0.085ppm. The 2009 monitoring data for Mecklenburg and Union County showed improvements, largely due to favorable weather conditions, and the economic down-turn.

2 Who is to say the economic conditions will not turn the new toll facility into the road less taken, despite any major improvements taken place (most likely never will) to Highway 74. The Connector 2000 Association Inc. filed for Chapter 9 bankruptcy. The nonprofit operates the Southern Connector (Toll Road) in Greenville SC. Even after toll rates were increased in 2005 and 2009, they could not generate enough revenue. Everyone in North Carolina is aware of the gas tax, the highest in the southeast. Everyone is also aware that revenues for the Department of Transportation are declining and there is little political will to raise taxes. The State's overall financial situation is no better. My concern is that by borrowing (TIFIA loans) and selling bonds and paying them back with toll revenue, will have the same result, as what happened to Greece(defaulted on loans creating junk bonds). Who is to say that investment banks could not open debt-masking derivatives for NC road debt, to make a huge profit, at the taxpayer's expense? Would the credit rating for NC and its entire Counties decline? The Short term gain in jobs for these road projects will pail when businesses decide the extra taxes will hurt the bottom line, so
2 they will leave and take the jobs with them. The economic reality is that this is a project that North Carolina cannot afford.

Currently Mecklenburg County is 14.9µg/m3 for the annual standard for PM 2.5. On February 24, 2009, the U.S. Court of Appeals for the D.C. Circuit remanded the National Ambient Air Quality Standards (NAAQS) for fine particulate matter (PM2.5) to EPA for reconsideration of the annual level of the standard (which EPA left at 15 micrograms per cubic meter (µg/m3)) and reconsideration of the secondary PM2.5 NAAQS. With respect to the annual PM2.5 NAAQS, the court held that the agency "failed to explain adequately why an annual level of 15 µg/m3 is 'requisite to protect the public health,' including the health of vulnerable subpopulations, while providing 'an adequate margin of safety.' 42 U.S.C. § 7409(b)(1)." The Clean Air Scientific Advisory Committee Recommendations Concerning the Final Rule for the National Ambient Air Quality Standards for particulate matter was between 12 and 14 µg/m3 and had this to say: " The CASAC recommended changes in the annual fine-particle standard because *there is clear and convincing scientific evidence that significant adverse human-health effects occur in response to short-term and chronic particulate matter exposures at and below 15 µg/m^3, the level of the current annual PM$_{2.5}$ standard*. The current administration stated that they would use sound science and the rule of law, and follow the advice of scientific advisors in

making their decisions. Based on previous monitoring data, an annual standard of 12 and 14 µg/m3 would place the Charlotte Metro area in non-attainment for particulate matter. Recently, North Carolina was successful in an injunction against the Tennessee Valley Authority and successful in litigation against EPA regarding the Clean Air Interstate Rule. The TVA was required to install millions of dollars in pollution control equipment for a few facilities to prevent particulate matter from affecting the health of NC citizens. I find it more than disingenuous that the State of North Carolina does not do more regarding mobile source emissions and to maintain an increased separation from these harmful emissions (PM & MSATS) that occur in the breathing zone

Could the FHWA give a detailed explanation of their rational for dismissing hundreds of independent peer reviewed studies of near roadway exposures of vehicular pollutants, as well as, all the studies below, as irrelevant to the proposed federal actions?

According to the final technical air quality memorandum, the FHWA had this to say about unavailable or incomplete information: "Some recent studies have reported that proximity to roadways is related to adverse health outcomes, particularly respiratory problems[3,4]. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they **do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.**"

3 South Coast Air Quality Management District, Multiple Air Toxic Exposure Study□II (2000); Highway Health Hazards, The Sierra Club (2004) summarizing 24 Studies on the relationship between health and air quality); NEPA's Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.
4 Department of Preventive Medicine, University of Southern California Los Angeles, Gauderman et. al. *Effect of exposure to traffic on lung development from 10 to 18 years of age: a cohort study.* The Lancet, (2007).

Miller KA, Siscovick DS, Sheppard L, Shepherd K, Sullivan JH, Anderson GL, Kaufman JD. Long-term exposure to air pollution and incidence of cardiovascular events in women. *N Engl J Med* 2007; 356:447-458 Dockery DW and Stone PH. Cardiovascular Risks from Fine Particulate Air Pollution *N Engl J Med* 2007; 356:511-513.)

Pope, C. Arden III. Mortality effects of longer term exposures to fine particulate air pollution: review of recent epidemiological evidence. Inhalation Toxicology 2007; 19 (Suppl. 1): 33-38.

Schwartz J, Coull B, Laden F, Ryan L. The Effect of Dose and Timing of Dose on the Association between Airborne Particles and Survival. *Environ Health Perspect* 2008; 116:64-69

Samet, Jonathan M. (2007) 'Traffic, Air Pollution, and Health', Inhalation Toxicology, 19:12, 1021 – 1027)

Adar, S. D. and Kaufman, J. D. 2007 'Cardiovascular Disease and Air Pollutants: Evaluating and Improving Epidemiological Data Implicating Traffic Exposure', Inhalation Toxicology, 19:1, 135–149

PM2.5 exposure has significant negative impacts on human health, even when the exposure occurs at levels at or below the NAAQS (Transcript at 1076-77; NC Exh. 467 at 1, 3) NC Exh. 242 is a 2006 expert report commissioned by the EPA for reasons entirely unrelated to this lawsuit. In light of the resulting objectivity, the Court finds the report to be uniquely compelling in the area of premature mortality resulting from PM2.5 exposure

Premature Mortality Exposure to – and inhalation of – air containing PM2.5 is 90-100% certain to cause premature mortality in humans (Transcript at 1037-38, 1130-31; NC Exh. 242 at viii, 3-23, 3-24.5)
(include all transcripts submitted in the DEIS relating to this TVA vs NC nuisance in FHWA response)

Künzli N, Jerrett M, Garcia-Esteban R, Basagaña X, Beckermann B, et al. (2010) Ambient Air Pollution and the Progression of Atherosclerosis in Adults. PLoS ONE 5(2): e9096. doi:10.1371/journal.pone.**0009096** **The paper is the first to link automobile and truck exhaust to the progression of atherosclerosis -- the thickening of artery walls -- in humans. The study was conducted by researchers from USC and UC Berkeley, along with colleagues in Spain and Switzerland.**

Jerrett et al "Long-Term Ozone Exposure and Mortality," New England Journal of Medicine, Volume 360:1085-1095. March 12, 2009, number 11).
http://content.nejm.org/cgi/content/abstract/360/11/1085

Ryan, Patrick H. and LeMasters, Grace K. (2007) 'A Review of Land-use Regression Models for Characterizing Intra urban Air Pollution Exposure', Inhalation Toxicology, 19:1, 127 - 133

Traffic related pollutants in Europe and their effect on allergic disease
Joachim Heinrich and Heinz-Erich Wichmann
Curr Opin Allergy Clin Immunol 4:000–000. # 2004 Lippincott Williams & Wilkins

The concentration of benzene in air samples from metropolitan areas was 0.58 ppb, but this does not address near roadways concentrations. A Minimum Risk Level of 0.003 ppm has been derived for chronic- duration inhalation exposure (≥1 year). It is not known if children are more susceptible to benzene poisoning than adults"
(http://www.atsdr.cdc.gov/toxguides/toxguide-3.pdf)

Qing L., L. Zhang, M. Shen, W.J. Jo, R. Vermeulen, G. Li, C. Vulpe, S. Lim, X. Ren, S.M. Rappaport, S.I. Berndt, M. Yeager, J. Yuenger, R.B. Hayes, M. Linet, S. Yin, S. Chanock, M.T. Smith, and N. Rothman. 2009. Large-scale evaluation of candidate genes identifies associations between DNA repair and genomic maintenance and development of benzene hematotoxicity. *Carcinogenesis* ; 30(1) :50-58. Available online: DOI: 10.1093/carcin/bgn249

Rappaport, S.M., S. Kim, Q. Lan, R. Vermeulen, S. Waidyanatha, L. Zhang, G. Li, S. Yin, R.B. Hayes, N. Rothman, and M.T. Smith. In Press (Online 18 February 18, 2009). Evidence that Humans Metabolize Benzene via Two Pathways. *Environmental Health Perspectives*
DOI:10.1289/ehp.0800510
Available online: http://www.ehponline.org/docs/2009/0800510/abstract.html

Ren X, Lim S, Smith MT, Zhang L. 2009. Werner syndrome protein, WRN, protects cells from DNA damage induced by the benzene metabolite hydroquinone. *Toxicol Sci* ; 107(2) :367-75. Available online: http://www.ncbi.nlm.nih.gov/pubmed/19064679

The EPA states: "Several studies have measured elevated concentrations of pollutants emitted directly by motor vehicles near roadways as compared to overall urban background levels.

Elevated concentrations of particulate matter, criteria pollutants, and mobile source air toxics, through monitoring, have been found to be significantly higher within 1000 to 1500 feet (particulate matter) from a major roadway. Meteorology, traffic type and volume, and topography are factors that can alter this distance. Pollutants measured with elevated concentrations include benzene, polycyclic aromatic hydrocarbons, carbon monoxide, nitrogen dioxide, black carbon, and coarse, fine, and ultra fine particulate matter. Meteorology, traffic type and volume, and topography are factors that can alter this distance**. Motor vehicle emissions generally occur within the breathing zone, and near- road populations can be exposed to "fresh" primary emissions as well as combustion pollutants "aged" in the atmosphere.** The EPA found that elevated exposures can occur due to potentially increased concentrations indoors and increased exposures during outdoor activities from many sources, including vehicle exhaust. A review of the literature determined that approximately 100% of gaseous compounds, such as benzene can penetrate indoors, and approximately 80% of diesel particulate matter can penetrate indoors. Studies suggest that ambient temperature variation can also affect particle number gradients near roads substantially. Wind direction also affects traffic-related air pollution mass concentrations inside and outside schools and homes near motorways. Diurnal variations in mixing layer height will also influence both near- road and regional air pollutant concentrations. Decreases in the height of the mixing layer (due to morning inversions, stable atmosphere, etc.) will lead to increased pollutant concentrations at both local and regional scales. Children may represent a subpopulation at increased risk from benzene exposure, (as well as particulate matter, Gauderman et al.) due to factors that could increase their susceptibility. Children have a higher unit body weight exposure because of their heightened activity patterns which can increase their exposures, as well as different ventilation tidal volumes, and frequencies, factors that influence uptake. This could entail a greater risk of leukemia and other toxic effects to children if they are exposed to benzene at similar levels as adults" (Control of Hazardous Air Pollutants from Mobile Sources Chapter EPA February 2007).

3 The FHWA needs to explain, in detail, there rational for dismissing this information as irrelevant to the proposed federal action. The FHWA response below also needs further explanation:

The 2006 guidance was updated on September 30, 2009. The updated guidance is discussed in **Section 2.5.2.2** of the Final EIS. The FHWA will continue to revise and update this guidance as the science on air toxic analysis continues to evolve. The range of 140,000-150,000 AADT was selected as a criterion for considering a quantitative MSAT analysis because through use of USEPA's MOBILE 6.2 emissions model, FHWA staff determined that this range of AADT would be roughly equivalent to the Clean Air Act definition of a major hazardous air pollutant (HAP) source, i.e. 25 tons/year for all HAPS or 10 tons/year for any single HAP.

This decision by FHWA is clearly arbitrary and capricious and sums up their whole interim guidance on MSAT's, and simply changing the date to this guidance is inadequate. According to FHWA ("The update "does not change any project analysis thresholds, recommendations, or guidelines.")

The Clean Air Act definition of a major hazardous air pollutant (HAP) source quoted by the FHWA is used primarily by point sources (Industrial Sources). Congress directed EPA to develop a program to develop further the regulation of HAPs in Section 112 of the 1990 Clean Air Act Amendments (CAAA). While the standards for major sources of HAPs developed per

this section are also designated as NESHAPs, they are established according to Maximum Achievable Control Technology (MACT) requirements. MACT is a technology-based standard, as opposed to the original conception of NESHAPs as a risk-based standard. These technology-based NESHAPs are located at 40 CFR 63 and incorporated by reference in 45CSR34.

EPA has set MACT standards for over 100 source categories as specified under Section 112(d) . While these MACT standards typically apply to major sources (those at facilities with greater than 10 ton/yr of a single HAP, or greater than 25 ton/yr of aggregate HAPs), many MACTs also apply to area sources (sources with less than 10/25 ton/yr HAP thresholds); a few MACTs apply only to area sources. EPA has also begun to slowly identify additional area sources of air toxics for regulation per its Integrated Urban Air Toxics Strategy as mandated by Section 112(k) of the CAAA. Many urban communities continue to be exposed to a high amount of hazardous air pollutants (air toxins). **The definition of major source depends upon a facility's potential to emit not its actual emissions.** Also, when a new facility is proposed, a quantitative analysis (using detailed computer models) is conducted from the source to see if any residential, schools etc., are impacted, before a permit is issued. In other words, this analysis gives decision makers valuable information to make informed decisions as to what pollution controls should be used, the stack height and location, to prevent harmful emissions to adjacent properties and residents.

In contrast, the FHWA builds a road facility, in many cases, within close proximity to residential sub-divisions, schools, and communities and only relies on inadequate interim MSAT guidance, knowing that motor vehicle emissions generally occur in the breathing zone.

According to the FHWA, through use of US EPA's MOBILE 6.2 emissions model, (FHWA is aware that the official MOVES model has replaced the MOBILE 6.2 model at the end of 2009) FHWA staff determined that this range of AADT would be roughly equivalent to the Clean Air Act definition of a major hazardous air pollutant (HAP) source, ie.25 tons/year for all HAPS or 10 tons/year for any single HAP, that is, 140000 to 150000 AADT.

The **projected** AADTs for the various DSAs vary by segment and range from 41,400 to 95,600 AADT on the western end of the project and 15,400 to 24,800 AADT on the eastern end of the project, according to the DEIS. In the western end of the project the total single HAP would range from approximately 3.0 and 6.6 tons/year, while all (187) HAPS & diesel PM would range from approximately 7.13 to 16.5 tons/year for this facility alone.

4 How can the FHWA be certain of the computer models that derive their projected AADT's?

As stated in the updated guidance (page 5), "air toxics analysis is an emerging field and current scientific techniques, tools, and data are not sufficient to accurately estimate human health impacts that would result from a transportation project in a way that would be useful to decision-makers."

Regarding the statement above, Independent research scientists, with work that is peer reviewed, all seem to find that near roadway exposures from Mobile sources is increasingly a problem. While the science may be new, and hard to grasp for the FHWA staff, it is not with other scientists. They are consistently finding tools, compiling data to quantify the human health impacts. This statement above is used by FHWA to circumvent the current NEPA CEQ regulations only.

5 Is the FHWA using science as an excuse not to conduct a quantitative MSAT analysis because it will leave decision makers with fewer options where they can build their road or perhaps just harder to rubber stamp EIS that have pre-determined sites(alternatives) where roads are placed?

6 How can the FHWA, using only a qualitative MSAT analysis know where to use effective MSAT mitigation measures to prevent hazardous emissions where people live and work, or where not to place a road because the emissions will be too high, for the roughly 10 miles of roadway in the western end of this project?

7 Will the FHWA conduct a quantitative MSAT analysis that incorporates the emissions from a new proposed facility in addition to the cumulative emissions from existing roadways?

8 Does the FHWA plan to use any MSAT mitigation for this project? Not sure where to use it? I wonder why?

Does the FWHA monitor the effectiveness of any MSAT mitigation sites, providing there are any, to determine if they are actually working?

Is the FHWA staff aware that the CAA definition of a major (point source) depends on a facility's potential to emit not its actual emissions?

Perhaps in metropolitan statistical areas, vehicle registration data, and transit tractor trailers, should be used to determine the potential to emit for mobile sources, and be required to conduct a quantitative analysis for (hotspot) NAAQS, as well as, MSATs for all road projects.

9 Will the FHWA conduct a quantitative MSAT analysis for this project using Human Exposure Model-3 (HEM-3), AERMOD Version, Assessment System for Population Exposure Nationwide model (ASPEN), Community Multi-scale Air Quality model (CMAQ), EPA Motor Vehicle Emission Simulator (MOVES) model, HAPEM-MS Hazardous Air Pollutant Exposure Model for Mobile Sources; and land use regression models?

These models, as well as others, can effectively conduct a quantitative MSAT analysis at the project level. Of course, proper effective monitoring of pollutants near roadways, for Individuals, and at sensitive receptors, can be used to refine models used to calculate exposures. Actual monitoring can be useful for specific exposure routes, duration and dose as well.

According to the EPA's National-scale Air toxics assessment for three census tracts in the western end of the proposed project are as follows:

	Cancer risk	Avg tot resp HI	Pollutant Contribution
FIPS 37179-020302	48/million	1.7	10% Benzene/ 72% Acrolein
37179-020303	51/million	1.9	11% Benzene/ 75% Acrolein
37179-020401	49/million	1.7	11% Benzene/ 73% Acrolein

10 Can the FHWA quantify the **increased** cancer risks, and average total respiratory HI, for all the census tracts that the proposed new facility will impact?

11 What percentage increase in cancer risk would this facility bring to all the census tracts along the route, especially, the homes in close proximity?

Again, EPA's vehicle and fuel regulations, coupled with fleet turnover is applauded and needed; however, over time, the substantial reductions that will cause region-wide air pollution levels to be significantly lower than today remains to be seen. No Federal or State laws mandate vehicle turnover. The fuel regulations could be eliminated or reduced in the future.

Sincerely,

Ed Eason

Table A-6: Ed Eason

Document: i006 letter dated June 29, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
Note: Many comments in Mr. Eason's June 29, 2010 letter dealt with Air Quality Policy and were not specific to the Monroe Connector/Bypass Final EIS. Only those comments specific to the Final EIS are listed below.			
1	Air Quality	The EPA is set to finalize the 2008 reconsidered 8 hour Ozone NAAQS on August 31, 2011, which is anticipated to range from 0.060 – 0.070 parts per million (ppm). How can the Charlotte Metro area possibly meet this standard in the future with the construction of this facility, and others, proposed in the area?	The current 8-hour NAAQS for ozone is 0.075 ppm. MUMPO currently has an approved Transportation Improvement Program (TIP) covering the years 2012 through 2018 which is a direct subset of the respective conforming 2035 LRTP. The FHWA and FTA approved a regional conformity determination for the MUMPO 2012-2018 TIP on December 19, 2011.[1] The latest conformity determination for the 2035 MUMPO LRTP is dated May 22, 2013, with a FHWA/FTA conformity finding on May 29, 2013.
2	Purpose and Need	Who is to say the economic conditions will not turn the new toll facility into the road less taken, despite any major improvements taken place (most likely never will) to Highway 74. The economic reality is that this is a project that North Carolina cannot afford.	The overall economic climate will vary from year to year and cannot be accurately predicted. Based on available information, including the *Proposed Monroe Connector/Bypass Comprehensive Traffic and Revenue Study Final Report* (Wilbur Smith and Associates, October 2010) (available on the project Web site), and the project's financial plan, NCDOT has determined that the project will be financially feasible.
3	Air Quality	The FHWA needs to explain, in detail, their rationale for dismissing this information as irrelevant to the proposed federal action.	The FHWA position does not consider the information from the EPA as irrelevant; however, as stated in Appendix E of the Final EIS, which was reviewed and determined still valid for the Draft Supplemental Final EIS, FHWA believes "Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable. Because of the limitations in the methodologies for forecasting health impacts…, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis."

[1] The December 19, 2011 conformity determination for the Metrolina Region is titled: Final *Conformity Analysis and Determination Report for the Metrolina Area: Cabarrus-Rowan MPO, Mecklenburg-Union MPO, and Gaston Urban Area MPO 2012-2018 Transportation Improvement Program, 2035 Long Range Transportation Plan Amendments and Projects from the 2012-2018 State Transportation Improvement Program for the Donut Area Counties of Lincoln, Iredell, Gaston, and Union*

Table A-6: Ed Eason

Document: i006 letter dated June 29, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
4	Air Quality	How can the FHWA be certain of the computer models that derive their projected AADT's?	FHWA reviews the travel demand modeling process as part of the MPO certification process (approximately every two years) and indicates their acceptance of the MPO's modeling procedures. FHWA's most recent certification of the CRTPO's (formerly MUMPO) travel demand model occurred on December 6, 2011. The tools utilized today provide the project with the best available information as to traffic volumes twenty years or more into the future.
5	Air Quality	Is the FHWA using science as an excuse not to conduct a quantitative MSAT analysis because it will leave decision makers with fewer options where they can build their road or perhaps just harder to rubber stamp EIS that have pre-determined sites(alternatives) where roads are placed?	See response to Comment #3 in this letter (i006). While there have been several studies regarding the health impacts of MSATs, none have addressed the MSAT health impacts in proximity of roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot-spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.
6	Air Quality	How can the FHWA, using only a qualitative MSAT analysis know where to use effective MSAT mitigation measures to prevent hazardous emissions where people live and work, or where not to place a road because the emissions will be too high, for the roughly 10 miles of roadway in the western end of this project?	See response to Comment #3 in this letter (i006). As a result of the qualitative MSAT analysis, it is expected there would be either minor changes or a slight reduction in MSAT emissions in the immediate area of the project, relative to the No-Build Alternative. In comparing the alternatives, MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. Based on these findings, no MSAT mitigation is warranted.
7	Air Quality	Will the FHWA conduct a quantitative MSAT analysis that incorporates the emissions from a new proposed facility in addition to the cumulative emissions from existing roadways?	Since publication of the Final EIS, FHWA issued new MSAT Guidance on December 6, 2012 (*Interim Guidance on Mobile Source Air Toxic Analysis in NEPA*). However, this updated guidance does not change any project analysis thresholds, recommendations, or guidelines. There is no change in the impact evaluation conclusions described in the Draft EIS and referenced in the Final EIS and Draft Supplemental Final EIS. Consistent with FHWA Guidance (*Memorandum – Interim Guidance on Air Toxic Analysis in NEPA Documents*, FHWA, December 6, 2012), a quantitative analysis is not required and will not be performed for this project.

Table A-6: Ed Eason

Document: i006 letter dated June 29, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
8	Air Quality	Does the FHWA plan to use any MSAT mitigation for this project? Not sure where to use it? I wonder why?	See response to Comment 6 in this letter (i006).
9	Air Quality	Will the FHWA conduct a quantitative MSAT analysis for this project using Human Exposure Model-3 (HEM-3), AERMOD Version, Assessment System for Population Exposure Nationwide model (ASPEN), Community Multi-scale Air Quality model (CMAQ), EPA Motor Vehicle Emission Simulator (MOVES) model, HAPEM-MS Hazardous Air Pollutant Exposure Model for Mobile Sources; and land use regression models?	See response to Comment 7 in this letter (i006).
10	Air Quality	Can the FHWA quantify the **increased** cancer risks, and average total respiratory HI, for all the census tracts that the proposed new facility will impact?	See response to Comment 5 in this letter (i006). For reasons stated in Appendix E of the Final EIS and the information below, FHWA cannot quantify the cancer risks in the project study area. According to the EPA's NATA website: (http://www.epa.gov/ttn/atw/natamain/) National-Scale Air Toxics Assessment (NATA) assessments do not incorporate refined information about emission sources, but rather, use general information about sources to develop estimates of risks which are more likely to overestimate impacts than underestimates them. NATA provides estimates of the risk of cancer and other serious health effects from breathing (inhaling) air toxics in order to inform both national and more localized efforts to identify and prioritize air toxics, emission source types and locations which are of greatest potential concern in terms of contributing to population risk. NATA results provide answers to questions about emissions, ambient air concentrations, exposures and risks across broad geographic areas (such as counties, states and the Nation) at a moment in time. As such, they help the EPA identify specific air toxics compounds, and specific source sectors such as stationary sources or mobile sources, which generally produce the highest exposures and risks in the country. These assessments are based on assumptions and methods that limit the range of questions that can be answered reliably. The results cannot be used to identify exposures and risks for specific individuals, or even to identify exposures and risks in small geographic regions such as a specific census block, i.e., hotspots. The NATA assessments should not be used for any of the following:

Table A-6: Ed Eason

Document: i006 letter dated June 29, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
			• As a sole means for identifying localized hotspots • As a definitive means to pinpoint specific risk values within a census tract • To characterize or compare risks at local levels such as between neighborhoods • As the sole basis for developing risk reduction plans or regulations • To control specific sources or pollutants • To quantify benefits of reduced air toxic emissions
11	Air Quality	What percentage increase in cancer risk would this facility bring to all the census tracts along the route, especially, the homes in close proximity?	See response to Comment 10 in this letter (i006).

NCDENR

North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

JUL 2010
RECEIVED
Secretary's Office
DOA

MEMORANDUM

TO: Valerie McMillan
State Clearinghouse

FROM: Melba McGee
Project Review Coordinator

RE: 10-0435 FEIS for proposed improvements to the US 74 corridor in Mecklenburg County to US 74 in Union County

DATE: July 16, 2010

The Department of Environment and Natural Resources has reviewed the proposed project.

1 It is requested that the Department of Transportation continue to work with our agencies in order to adequately address any outstanding concerns. Addressing agency comments during the NEPA Merger Process or prior to finalizing the Record of Decision will avoid delays during the permit phase.

Thank you for the opportunity to comment on this project.

Attachments

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Table A-7: NC Department of Environment and Natural Resources

Document: a001 letter dated July 16, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	General	The Department of Environment and Natural Resources has reviewed the proposed project. It is requested that the Department of Transportation continue to work with our agencies in order to adequately address any outstanding concerns. Addressing agency comments during the NEPA Merger Process or prior to finalizing the Record of Decision will avoid delays during the permit phase.	NCDOT has continued to work closely with the environmental resource and regulatory agencies during preparation of the Draft Supplemental Final EIS, as summarized in **Section 5.3**, and will continue to work closely with the agencies during the Design-Build phase.

North Carolina Wildlife Resources Commission

TO: Melba McGee, Environmental Coordinator
Department of Environment and Natural Resources

FROM: Marla Chambers, Western NCDOT Permit Coordinator *Marla Chambers*
Habitat Conservation Program, NCWRC

DATE: July 13, 2010

SUBJECT: Review of the Final Environmental Impact Statement for proposed improvements to the US 74 corridor from I-485 in Mecklenburg County to US 74 between the towns of Wingate and Marshville in Union County (Monroe Connector/Bypass). TIP Nos. R-2559 and R-3329. DENR Project No.: 10-0435, originally due 07/06/2010, extended to 07/13/2010.

The North Carolina Turnpike Authority (NCTA) has submitted a Final Environmental Impact Statement (FEIS) for the proposed Monroe Connector/Bypass project, which had previously been analyzed by the North Carolina Department of Transportation (NCDOT) as two separate projects (Monroe Bypass and Monroe Connector). Staff biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed the information provided and have attended the Turnpike Environmental Agency Coordination (TEAC) meetings for the project. These comments are provided in accordance with the provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

NCTA proposes to construct a new location toll facility from I-485 in Mecklenburg County to US 74 between the towns of Wingate and Marshville in Union County, approximately 20 miles in length. NCWRC has provided several comment letters and other input during the development of this project under both NCDOT and NCTA planning processes. Our comments on the Draft Environmental Impact Statement, dated May 26, 2009, were included in the FEIS. Our most recent project comments, which reviewed the Draft Indirect and Cumulative Effects Water Quality Analysis for the Monroe Connector/Bypass technical report, were submitted May 28, 2010. These comment letters continue to be appropriate and we remain concerned about the

1

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

1 potential negative effects of this project and others on the sensitive aquatic resources in this rapidly developing region.

Water quality in the project study area will have significant effects on the future of both human and wildlife populations. According to the above mentioned technical report, the project study area contains 54 named streams, 22 of which have Water Supply classifications and six are also assigned a Critical Area designation. Eleven of the named streams are on the latest 303(d) lists of impaired waters (draft and final lists): McAlpine Creek, Sixmile Creek, Beaverdam Creek, Crooked Creek, North and South Forks Crooked Creek, Duck Creek, Goose Creek, Little Richardson Creek, Richardson Creek, and Stewarts Creek. This is of particular concern because a number of federal and state listed aquatic species depend on several of these impaired streams for survival or, potentially, their continued existence.

The Carolina heelsplitter (*Lasmigona decorata*), a federal and state Endangered (E) mussel, occurs in Goose, Duck, and Sixmile Creeks within the project area. Only six populations occur in the world, each considered critical to the survival of the species. Other listed species observed in Goose Creek and its tributary, Duck Creek, include Atlantic pigtoe (*Fusconaia masoni*), Federal Species of Concern (FSC) and state E; Carolina creekshell (*Villosa vaughaniana*), FSC and state E; creeper (*Strophitus undulatus*), state Threatened; notched rainbow (*V. constricta*), state Special Concern (SC); and eastern creekshell (*V. delumbis*), state Significantly Rare. Sixmile Creek is also occupied by the Carolina creekshell and eastern creekshell. The Carolina darter (*Etheostoma collis*), a FSC and state SC fish, and the following listed mussel species have been recorded in the South Fork and North Fork of Crooked Creek: Savannah lilliput (*Toxolasma pullus*), FSC and state E; Carolina creekshell; and eastern creekshell. Richardson Creek also has records for the Savannah lilliput, Carolina creekshell, and the eastern creekshell. In addition, the Twelvemile Creek watershed has occurrences of the Carolina creekshell, notched rainbow and eastern creekshell.

2 We commend NCTA for commitments to minimize direct impacts by adhering to the Design Standards in Sensitive Watersheds for sediment and erosion control along the entire project and the use of bridge crossings at several locations. The bridges not only reduce impacts to sensitive waters, but also improve safety for the public and wildlife by providing areas for wildlife, including large mammals, to cross safely under the road, and by maintaining floodplain functions that help reduce flooding and flood damage. We also appreciate NCTA's response to one of our comments on the DEIS, that indicated they will work with us to protect state-listed species where feasible and practicable.

3 Indirect and cumulative impacts remain our greatest concern for this project and have the potential to be much more significant than the direct impacts. The FEIS summarized the qualitative and quantitative analysis of the Indirect and Cumulative Effects (ICEs) on land use and water quality and provided copies of those reports in the appendices. In general, the effects attributed to the project were characterized as small relative to the overall effects from projected development in the study area. Differences in impervious cover and water quality parameters due to the project were indicated in six of the eighteen watersheds studied, with most of the induced development occurring within a mile of the proposed interchanges.

The watersheds determined to be affected by the project were Crooked Creek, Richardson Creek (Middle and Lower watersheds), Rays Fork, Stewarts Creek, and Salem Creek. The differences in impervious cover between the 2030 Preferred Alternative and the 2030 No-Build scenarios were indicated to be one or two percent of the individual watersheds. Some of these affected watersheds contain listed species, others contain impaired streams, and some have both. As indicated in the FEIS, NCWRC recommends the threshold of concern for impervious surfaces is six percent for watersheds containing Threatened or Endangered mussel species and ten percent for other watersheds. The range of percentages of impervious cover predicted for the Preferred Alternative in the year 2030 was from seven to 37 percent, most (15 of 18) were greater than ten percent. Of those with the Endangered Carolina heelsplitter, the Goose Creek watershed was predicted to have 17 percent imperviousness and the Sixmile Creek watershed was forecast to be 30 percent. This and other project ICE analysis revealed the significance of the cumulative effects on the project area and its aquatic resources.

The quantitative ICE water quality technical report, in particular, revealed cumulative impact data that is of serious concern for the listed species in the study area. For example, the Lower Richardson Creek watershed, which is indicated to be affected by the project, was predicted to have 20.5 percent more annual total fecal coliform and 4.5 percent additional annual total phosphorus. Most alarming was the forecast for Sixmile Creek; although not indicated to be affected by the project, a 70 percent increase in runoff, more than a 40 percent increase in total suspended solids, and an 80 percent increase in annual total fecal coliform were projected for the year 2030.

A2-31

4 The project ICE analysis appears to show that the project is a contributing factor in the cumulative effects that are likely to have significant negative effects on the health of area waterways and wildlife habitat and the sensitive species that inhabit them. It appears that substantial efforts will be required, beyond those accounted for in the ICE analysis, to provide appropriate protection for listed species, including the federally protected Carolina heelsplitter, with or without this project. Those measures will be critical if the project is built and additional measures may be needed due to project-induced impacts.

5 The FEIS included a section from the Federal Highway Administration (FHWA) Position Paper: Secondary and Cumulative Impact Assessment In the Highway Project Development Process which states "measures that would be appropriate to offset most future developmental impacts in the area of a project often will be beyond the control and funding authority of the highway program. In these situations, the best approach would be to work with local agencies that can influence future growth and promote the benefits of controls that incorporate environmental protection into all planned development." In addition, since past, present and reasonably foreseeable NCDOT projects in the project area certainly contribute to the cumulative impacts, and NCTA is now a division of NCDOT, it is reasonable to recommend these agencies work with the local authorities to implement measures that will greatly reduce or mitigate the negative effects of development on water quality throughout the study area, including the negative effects induced by the project. Strong regulations regarding development and stormwater management, and the enforcement of those regulations will be crucial to the success of mitigation measures and the ultimate protection of listed species.

Thank you for the opportunity to review and comment on this project. If you have any questions regarding these comments, please contact me at (704) 485-8291. We look forward to continuing our participation in the planning process for this project.

cc: Marella Buncick, USFWS
Polly Lespinasse, NCDWQ
Christopher Militscher, USEPA
Angie Rodgers, NCNHP

Table A-8: NC Wildlife Resources Commission

Document: a002 letter dated July 13, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	General	NCWRC has provided several comment letters and other input during the development of this project under both NCDOT and NCTA planning processes. Our comments on the Draft Environmental Impact Statement, dated May 26, 2009, were included in the FEIS. Our most recent project comments, which reviewed the Draft Indirect and Cumulative Effects Water Quality Analysis for the Monroe Connector/Bypass technical report, were submitted May 28, 2010. These comment letters continue to be appropriate and we remain concerned about the potential negative effects of this project and others on the sensitive aquatic resources in this rapidly developing region.	Comment noted. Impacts to natural resources are addressed in **Section 4.4** and **Section 4.5** of the Draft Supplemental Final EIS.
2	Wildlife	We commend NCTA for commitments to minimize direct impacts by adhering to the Design Standards in Sensitive Watersheds for sediment and erosion control along the entire project and the use of bridge crossings at several locations. The bridges not only reduce impacts to sensitive waters, but also improve safety for the public and wildlife by providing areas for wildlife, including large mammals, to cross safely under the road, and by maintaining floodplain functions that help reduce flooding and flood damage. We also appreciate NCTA's response to one of our comments on the DEIS, that indicated they will work with us to protect state-listed species where feasible and practicable.	Thank you for your comment. NCDOT will continue to work closely with the agencies throughout the project development process. As stated in the Project Commitments section of the Draft Supplemental Final EIS, NCDOT will implement *Design Standards in Sensitive Watersheds* for the entire length of the project.
3	Indirect and Cumulative Effects	Indirect and cumulative impacts remain our greatest concern for this project and have the potential to be much more significant than the direct impacts.	The indirect and cumulative impacts assessment has been updated since the Final EIS, as documented in *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) and summarized in **Section 4.5** of the Draft Supplemental Final EIS. While the impacts from the indirect and cumulative effects from the project are modest, localities can help to mitigate the impacts that this growth will have by implementing recommendations from the NCWRC Green Growth Toolbox and other practices, which could reduce cumulative development effects within the study area through such tools as clustered development, Low Impact Design, improved stormwater management, larger riparian buffers and conservation of environmentally sensitive habitats. A discussion of how indirect and cumulative impacts can be minimized or avoided is included in **Section 4.5.6** of the Draft Supplemental Final EIS.

Table A-8: NC Wildlife Resources Commission

Document: a002 letter dated July 13, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
4	Indirect and Cumulative Effects	The project ICE analysis appears to show that the project is a contributing factor in the cumulative effects that are likely to have significant negative effects on the health of area waterways and wildlife habitat and the sensitive species that inhabit them. It appears that substantial efforts will be required, beyond those accounted for in the ICE analysis, to provide appropriate protection for listed species, including the federally protected Carolina heelsplitter, with or without this project. Those measures will be critical if the project is built and additional measures may be needed due to project-induced impacts.	See response to Comment 3 in this letter (a002). Effects on endangered species are summarized in **Section 4.4.5** and **Section 4.5.5.3** of the Draft Supplemental Final EIS. Conservation measures were proposed in the Biological Assessment (*Biological Assessment for the Monroe Connector-Bypass Project*, The Catena Group, May 2010) and accepted by USFWS to further ensure a conservative approach to the analysis of the project's impacts on the Carolina heelsplitter. These measures included funding continued operation of US Geological Survey stream gauge on Goose Creek for 5 years and providing funding to the Carolina Heelsplitter Conservation Bank in the Flat Creek watershed in Lancaster County, South Carolina in the amount of $150,000 to support ongoing research and surveying efforts, as well as protect, manage, and monitor land in the conservation bank. These conservation measures have been implemented. A new Biological Assessment was provided to USFWS in October 2013. The biological conclusions presented in the new Biological Assessment are the same as those presented in the May 2010 Biological Assessment. NCDOT and FHWA are working with USFWS to reach concurrence on the new Biological Assessment. Consultation with USFWS will be complete prior to issuance of the Final Supplemental Final EIS/ROD for the project.
5	Indirect and Cumulative Effects	The FEIS included a section from the Federal Highway Administration (FHWA) Position Paper: Secondary and Cumulative Impact Assessment In the Highway Project Development Process which states "measures that would be appropriate to offset most future developmental impacts in the area of a project often will be beyond the control and funding authority of the highway program. In these situations, the best approach would be to work with local agencies that can influence future growth and promote the benefits of controls that incorporate environmental protection into all planned development." In addition, since past, present and reasonably foreseeable NCDOT projects in the projects area certainly contribute to the cumulative impacts, and NCTA is now a division of NCDOT, it is reasonable to recommend these agencies work with the local authorities to implement measures that will greatly reduce or mitigate the negative effects of development on water quality throughout the study area, including the negative effects induced by the project. Strong regulations regarding development and stormwater management, and the enforcement of those regulations will be crucial to the success of mitigation measures and the ultimate protection of listed species.	See response to Comment 3 in this letter (a002). NCDOT lacks the enforcement authority to require local governments adopt regulations and land use plans that would help protect significant natural resources.

NCDENR

North Carolina Department of Environment and Natural Resources
Division of Water Quality

Beverly Eaves Perdue
Governor

Coleen H. Sullins
Director

Dee Freeman
Secretary

June 28, 2010

MEMORANDUM

To: Melba McGee, Environmental Coordinator, Office of Legislative and Intergovernmental Affairs

From: Polly Lespinasse, Division of Water Quality, Mooresville Regional Office

Subject: Comments on the Final Environmental Impact Statement Related to the Proposed Monroe Connector/Bypass from near I-485 at US 74 to US 74 Between the Towns of Wingate and Marshville, Mecklenburg and Union Counties, Federal Aid Project No. STP-NHF-74(90), WBS Element 34533.1.TA1, STIP Project Number R-3329/R-2559, DENR Project No. 10-0435, Due Date 07/06/2010

This office has reviewed the referenced document dated May 2010. The NC Division of Water Quality (NCDWQ) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. It is our understanding that the project as presented will result in impacts to jurisdictional wetlands, streams, and other surface waters. NCDWQ offers the following comments based on review of the aforementioned document:

A2-34

Project Specific Comments:

1. The document makes several references to the stream mitigation requirements for the project. The document indicates that all perennial streams will require mitigation. In addition, the document states that if an intermittent stream has a stream rating equal to or greater than 26, as per the completed NCDWQ Stream Identification Form, then mitigation will be provided. Effective October 16, 2009, NCDWQ will require mitigation for all jurisdictional streams, either intermittent or perennial. The applicable portion of the *Intermittent Stream Mitigation Policy*, as identified in the Public Notice, published August 14, 2009, is included below:

   NCDOT projects reviewed through the Clean Water Act Section 404/ National Environmental Policy Act Merger 01 Process (Merger 01) or Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, published by the US Army Corps of Engineers and the Federal Highway Administration, 2003) or its immediate successor, and that have reached agreement with Department of Environment and Natural Resources on avoidance and minimization (Concurrence Point 4A) prior to the effective date of this policy are not subject to the new intermittent stream mitigation policy. Furthermore, if a project is not reviewed by the Merger 01 process or SAFETEA-LU or its immediate successor but has an issued Finding of No Significant Impact and has the written approval of the NC Division of Water Quality prior to the effective date of this policy, then it is not subject to the new Intermittent Stream Mitigation Policy.

   Therefore, please be advised, DWQ will require mitigation for all jurisdictional streams (stream rating equal to or greater than 19 as per the completed NCDWQ Stream Identification Form) impacted by this project.

2. North Fork Crooked Creek, South Fork Crooked Creek, and Richardson Creek are Class C, 303(d) Waters of the State. Stewarts Creek is a Class WS-III, 303(d) Waters of the State.

Mooresville Regional Office
Location: 610 East Center Ave., Suite 301 Mooresville, NC 28115
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2. North Fork Crooked Creek, South Fork Crooked Creek, Richardson Creek and Stewarts Creek are on the 303(d) list for impaired use for aquatic life due to impaired biological integrity. North Fork Crooked Creek is on the 303(d) list for impaired use for aquatic life due to turbidity. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. As per the commitment in the Final Environmental Impact Statement, the North Carolina Turnpike Authority (NCTA) shall provide the most protective sediment and erosion control BMPs in accordance with *Design Standards in Sensitive Watersheds* to reduce the risk of nutrient runoff to North Fork Crooked Creek, South Fork Crooked Creek, Richardson Creek and Stewarts Creek. NCDWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ *Stormwater Best Management Practices*.

3. Due to the proximity of the project to Lake Twitty, which is classified as a Water Supply III (WS-III) Area in the project area, the NCTA shall design, construct, and maintain hazardous spill catch basins as per the commitment in the Final Environmental Impact Statement.

General Comments:

4. The environmental document should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.

5. Environmental impact statement alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ's *Stormwater Best Management Practices Manual*, July 2007, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

6. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the NCTA is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules (15A NCAC 2H.0506(h)), mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.

7. In accordance with the Environmental Management Commission's Rules (15A NCAC 2H.0506(h)), mitigation will be required for impacts of greater than 150 linear feet to any single stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.

8. Future documentation, including the 401 Water Quality Certification Application, shall continue to include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.

9. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCTA shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.

10. An analysis of cumulative and secondary impacts anticipated as a result of this project is required. The type and detail of analysis shall conform to the NC Division of Water Quality Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.NCTA is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, and rip rap to jurisdictional wetlands, streams, and riparian buffers need to be included in the final impact calculations. These impacts, in addition to any construction impacts, temporary or otherwise, also need to be included as part of the 401 Water Quality Certification Application.

11. Where streams must be crossed, NCDWQ prefers bridges be used in lieu of culverts. However, we realize that economic considerations often require the use of culverts. Please be advised that culverts should be countersunk to allow unimpeded passage by fish and other aquatic organisms. Moreover, in areas where high quality wetlands or streams are impacted, a bridge may prove preferable. When applicable, NCTA should not install the bridge bents in the creek, to the maximum extent practicable.

12. Whenever possible, NCDWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) should not be placed in the stream when possible.

13. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWQ's *Stormwater Best Management Practices*.

14. Sediment and erosion control measures should not be placed in wetlands or streams.

15. Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.

16. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater shall not be permitted to discharge directly into streams or surface waters.

17. Based on the information presented in the document, the magnitude of impacts to wetlands and streams may require an **Individual Permit (IP)** application to the Corps of Engineers and corresponding 401 Water Quality Certification. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the NCTA and written concurrence from NCDWQ. Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable stormwater management plan, and the inclusion of appropriate mitigation plans where appropriate.

18. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.

19. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.

20. Placement of culverts and other structures in waters, streams, and wetlands shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

21. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

22. If foundation test borings are necessary, it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3687/Nationwide Permit No. 6 for Survey Activities.

23. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.

24. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.

25. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.

26. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

27. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.

28. Riparian vegetation (native trees and shrubs) shall be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

NCDWQ appreciates the opportunity to provide comments on your project. Should you have any questions or require any additional information, please contact Polly Lespinasse at (704) 663-1699.

Cc: Liz Hair, US Army Corps of Engineers, Asheville Field Office (electronic copy only)
Chris Militscher, Environmental Protection Agency (electronic copy only)
Marla Chambers, NC Wildlife Resources Commission (electronic copy only)
Marella Buncick, US Fish and Wildlife Service, (electronic copy only)
Brian Wrenn, NCDWQ Central Office (electronic copy only)
Sonia Carrillo, NCDWQ Central Office (electronic copy only)
File Copy

Table A-9: NC Department of Environment and Natural Resources – Division of Water Quality

Document: a003 letter dated June 28, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	Jurisdictional Resources	The document makes several references to the stream mitigation requirements for the project. The document indicates that all perennial streams will require mitigation. In addition, the document states that if an intermittent stream has a stream rating equal to or greater than 26, as per the completed NCDWQ Stream Identification Form, then mitigation will be provided. Effective October 16, 2009, NCDWQ will require mitigation for all jurisdictional streams, either intermittent or perennial. The applicable portion of the Intermittent Stream Mitigation Policy, as identified in the Public Notice, published August 14, 2009, is included below. NCDOT projects reviewed through the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (Merger 01) or Safe Accountable Flexible Efficient Transportation Equity Act; A Legacy for Users (SAFETEA-LU, published by the US Army Corps of Engineers and the Federal Highway Administration, 2003) or its immediate successor, and that have reached agreement with Department of Environmental and Natural Resources on avoidance and minimization (Concurrence Point 4A) prior to the effective date of this policy are not subject to the new intermittent stream mitigation policy. Furthermore, if a project is not reviewed by the Merger 01 process or SAFETEA-LU or its immediate successor but has an issued Finding of No Significant Impact and has the written approval of the NC Division of Water Quality prior to the effective date of this policy, then it is not subject to the new Intermittent Stream Mitigation Policy. Therefore, please be advised, DWQ will require mitigation for all jurisdictional streams (stream rating equal to or greater than 19 as per the completed NCDWQ Stream Identification Form) impacted by this project.	NCDOT and FHWA are aware of the changes to stream mitigation requirements. In June 24, 2010 letters to USACE and NCTA (NCDOT), the Ecosystem Enhancement Program confirmed that they will provide all compensatory stream (intermittent and perennial) and riparian wetland mitigation for this project. Copies of these letters can be found in **Appendix C-1** of the Draft Supplemental Final EIS. The conceptual mitigation plan is incorporated into the Draft Supplemental Final EIS by reference and can be found on the project website: http://www.ncdot.gov/projects/monroeconnector/download/monroe_FEIS_ConceptualMitigation.pdf

Table A-9: NC Department of Environment and Natural Resources – Division of Water Quality

Document: a003 letter dated June 28, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
2	Water Quality	NCDWQ is very concerned with sediment and erosion impacts that could result from this project. As per the commitment in the Final Environmental Impact Statement, the North Carolina Turnpike Authority (NCTA) shall provide the most protective sediment and erosion control BMPs in accordance with Design Standards in Sensitive Watersheds to reduce the risk of nutrient runoff to North Fork Crooked Creek, South Fork Crooked Creek, Richardson Creek and Stewarts Creek. NCDWQ requests that road design plans provide treatment of the storm water runoff though best management practices as detailed in the most recent version of NCDWQ Stormwater Best Management Practices.	NCDOT's NPDES Stormwater Permit NCS000250 requires the use of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* for the selection and design of post-construction linear stormwater control measures on NCDOT projects.
3	Water Quality	Due to the proximity of the project to Lake Twitty, which is classified as a Water Supply III (WS-III) Area in the project area, the NCTA shall design, construct, and maintain hazardous spill catch basins as per the commitment in the Final Environmental Impact Statement.	Final designs will incorporate hazardous spill basins along the project corridor within the designated hazardous spill basin area associated with Lake Twitty. These basins will be designed in accordance with NCDOT's *Best Management Practices for Protection of Surface Waters*, *Guidelines for the Location and Design of Hazardous Spill Basins*, and *Guidelines for Drainage Studies and Hydraulic Design*.

a004

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: UNION
MECKLENBURG

F05: RAILROADS

STATE NUMBER: 10-E-4220-0435
DATE RECEIVED: 06/10/2010
AGENCY RESPONSE: 07/07/2010
REVIEW CLOSED: 07/12/2010

RECEIVED
JUN 11 2010
HISTORIC PRESERVATION OFFICE

MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORDINATOR
DEPT OF CULTURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
MSC 4617 - ARCHIVES BUILDING
RALEIGH NC

ER 02-9791

Due 6/18/10 A- 7m N/cat this time 6/17/10

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DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

Due 6/24/10 S -

PROJECT INFORMATION

APPLICANT: State of N.C. Turnpike Authority
TYPE: National Environmental Policy Act
Final Environmental Impact Statement

DESC: Improvements in the Monroe Connector/Bypass from I-485 to US 74 in the vicinity of the Town of Marshville in Union Co. TIP Nos. R-3329 & R-2559

CROSS-REFERENCE NUMBER: 02-E-4220-0309 04-E-4220-0332 07-E-4220-0235 09-E-4220-0292

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: [X] NO COMMENT [ ] COMMENTS ATTACHED

SIGNED BY: Renee Gledhill-Earley DATE: 7-7-10

JUL 2010
RECEIVED
Secretary's Office
DOA

JUN 14 2010

Table A-10: NC Department of Cultural Resources

Document: a004 letter dated July 7, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	General	No comments.	None

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUL 15 2010

Date: July 12, 2010

Ms. Jennifer Harris, P.E.
North Carolina Turnpike Authority
5400 Glenwood Avenue, Suite 400
Raleigh, North Carolina 27612

SUBJECT: Federal Final Environmental Impact Statement for the Monroe Connector/Bypass, From I-485 at US 74 to US 74 Between the Towns of Wingate and Marshville, Mecklenburg and Union Counties, North Carolina; TIP Project Nos.: R-3329/R-2559; FHW-E40825-NC; CEQ No.: 20100209

Dear Ms. Harris:

The U.S. Environmental Protection Agency Region 4 (EPA) has reviewed the subject document and is commenting in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA. The North Carolina Turnpike Authority (NCTA) and the Federal Highway Administration (FHWA) are proposing to construct an approximate 20-mile, multi-lane, median divided bypass and toll facility from I-485 at US 74 to US 74 between the Towns of Wingate and Marshville in Mecklenburg and Union Counties.

The NCTA is utilizing the agency coordination process under SAFETEA-LU Section 6002. EPA provided detailed scoping comments under this process in a letter dated February 14, 2007, and comments on the Draft Environmental Impact Statement (DEIS) on June 15, 2009. In addition to comments on the Final Environmental Impact Statement (FEIS), EPA is also providing written comments on the Draft Indirect and Cumulative Effects (ICE) Quantitative Analysis report dated February 19, 2010. EPA has attached detailed technical review comments (See Attachment A).

EPA's primary environmental concern remains unresolved for impacts to the waters of the U.S., including the need to demonstrate additional avoidance and minimization for direct impacts to jurisdictional streams and wetlands, the need to provide environmental commitments to reduce the indirect and cumulative effects (ICE) to Section 303(d) listed impaired streams and the need to provide a detailed conceptual mitigation plan for jurisdictional impacts. These Clean Water Act issues need to be addressed prior to the issuance of a Record of Decision (ROD). FHWA and NCTA should consider a reduced median width and other avoidance and minimization measures to reduce the construction footprint in jurisdictional areas. FHWA and NCTA should work closely with local governments to insure that ICE resulting from the proposed project does not further degrade Section 303(d) listed streams. EPA recommends that a compensatory mitigation meeting be planned to discuss the conceptual mitigation for unavoidable impacts. EPA continues to have environmental concerns for wildlife habitat fragmentation, farmland losses, socio-economic impacts to existing businesses, and

a005

Mobile Source Air Toxics (MSATs). EPA also believes that additional consideration should be given with respect to MSATs associated with the Preferred Alternative DSA D and identified near- roadway, sensitive receptors. We understand that there is also an unresolved issue that needs to be addressed concerning the Carolina heelsplitter in the Goose Creek watershed per Section 7 of the Endangered Species Act; EPA defers to the U.S. Fish and Wildlife Service on this issue.

Mr. Christopher Militscher of my staff will continue to work with you and FHWA and other agencies on the continued environmental coordination activities for this project. Please feel free to contact Mr. Militscher of my staff at (919) 856-4206 should you have specific questions concerning EPA's comments.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office

Cc: J. Sullivan, FHWA
K. Jolly, USACE
B. Wrenn, NCDENR
G. Thorpe, NCDOT

w/Attachment A

Attachment A
FEIS Detailed Review Comments
Monroe Bypass/Connector Toll Facility
Mecklenburg and Union Counties
R-3329/R-2559

Response to EPA DEIS Comments

Responses to EPA's DEIS comments are included in Appendix B1 from pages B1-37 to B1-83. In addition, Section 3 of the FEIS also provides responses to generalized comments on Purpose and Need, the Range of Alternatives, Air Quality, Indirect and Cumulative Effects, and Protected Species.

1 Many of NCTA and FHWA's responses to DEIS comments are a reiteration of its stated positions from the DEIS and during TEAC meetings. For example, Comment #2, Page B1-49 refers to 'likely would be overwhelmed' and 'would not provide for high-speed regional travel'. The responses are generic and are not supported by actual analysis. Another unresolved issue pertains to traffic forecasting where Comment #2 refers to a substantial increase in traffic volumes expected by 2035. However, vehicle miles traveled (VMTs) are expected to slightly decrease. The modeling and projections are not believed by EPA to be accurate or reasonable. The projected VMT decrease is partly defended on the position that people from the north will have a shorter route to the new toll facility. However, people who live south of existing US 74 will have a longer route to use the new toll facility. Population demographics actually show more people living to the south of existing US 74 than north of it. The other rationale for decreased VMTs is the 'slightly shorter route' of the new toll facility versus existing US 74. The ICE report also includes the potential for 1,300 new households in the project study area as well as hundreds of acres converted to commercial uses around new interchanges. This expected development would invariably increase VMTs as well.

2

3 EPA notes that the information contained in Section 1.1.8 of the FEIS on existing roadway improvements that has occurred in the past ten years. This new information contradicts and corrects the statement made in the DEIS: "Few, if any access management techniques have been applied to this roadway" (Comment #3, B1-49). Obviously from the list provided on pages 1-5 and 1-6, a substantial number of individual improvements to existing US 74 have been made during the last ten years. With all of these improvements, including numerous turn lane additions by NCDOT for retail stores and other commercial facilities, it indicates that local planners were encouraging significant amounts of commercial and retail development along this regionally strategic east-west highway corridor (See also NCTA Response to Comment #8). Local planners apparently did not believe that the US 74 corridor needed to be a regional high-speed facility as proposed by the NCDOT almost 20 years ago nor did they incorporate reasonable access and congestion management techniques in their local planning and zoning for these new commercial and retail facilities. Apparently, the local assumption was that NCDOT and FHWA would build Union County a new Monroe bypass as was initially proposed back in the late 1980's.

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4 Regarding the Response to Comment #11, EPA continues to disagree with Quantitative Third Screening that was used for the Detailed Study Alternatives and the use of a 'conceptual right of way' and GIS level data in lieu of actual wetland and stream delineations. The FEIS response to EPA's DEIS comment has not been adequately addressed. Similarly, Responses to Comments #12 and #13 do not address the increases

5 and decreases in residential and business relocations and jurisdictional impacts. For Response to Comment #15, there is no socio-economic analysis to local businesses and

6 retail stores along US 74 that will potentially see far less business once the new toll facility is constructed. Response to Comment #18 does not include recommendations for potential avoidance and minimization by reducing the 70-foot proposed median and 12-

7 foot paved outside shoulders. There is no specific recommendation as to what 'additional opportunities for impact minimization and cost reduction' will be and what opportunity for agency input will be considered during the final design.

8 The Response to Comment #19 concerning compensatory mitigation is not detailed or responsive to the specific issues (See comments below). The conceptual mitigation plan referenced in Response to Comment #20 and included in Section 2.5.4.4 is not detailed. Essentially, NCTA and FHWA state that with the exception of possibly 4 on-site mitigation opportunities, all compensatory mitigation will be provided through the in-lieu fee program of the Ecosystem Enhancement Program (EEP) and they have been regularly apprised of anticipated mitigation requirements. Unfortunately, NCTA and FHWA have been going on the assumption that only some of the intermittent stream impacts will require compensatory mitigation. This is no longer the case, as the North Carolina Division of Water Quality now requires mitigation for all intermittent streams. The conceptual mitigation plan is actually a technical memorandum that is incorporated by reference to the FEIS (This document should have been included in one of the appendices to the FEIS). There is no information provided through the EEP as to what mitigation assets are available or what is being planned for the impacted watershed basins. This deficiency of a detailed mitigation proposal is significant and needs to be resolved prior to the issuance of a ROD. Response to Comment #24 is also not responsive. The resource and permitting agencies have not been given the opportunity to provide a detailed field review of the 4 potential sites. EPA continues to have substantial environmental concerns for the lack of detail concerning compensatory mitigation.

9 NCTA and FHWA's Response to Comment #22 is not responsive and there is no estimate of potential impacts to jurisdictional resources from anticipated borrow pits and from waste disposal. This potentially substantial environmental issue is being deferred to later design work and potentially after the issuance of the Record of Decision (ROD). EPA does not agree with the Response to Comment #23 and the ICE findings. Contrary to the response provided, there are anticipated water quality issues associated with the proposed project, and minimally, to the 303(d) listed Stewarts Creek. Pollutant loadings

10 for the six catchments did not remain 'unchanged' between the 2030 No Build and the 2030 Recommended Preferred Alternative (RPA) scenarios. Table 17 of the ICE shows Total Nitrogen (TN) for lower Richardson's Creek to be 1.52% higher between the 2030 RPA and 2030 No-Build. Total Phosphorus (TP) shown in Table 18 is also increased by

2.52% and 4.50% for Stewarts Creek and Richardson's Creek, respectively. Table 19 likewise shows four catchments with increased Total Suspended Solid (TSS) between
10 1.45% and 2.20% between the 2030 RPA and the 2030 No-Build. Referring to Tables 20 and 21, Total Fecal Coliform for Richardson's Creek is estimated to increase by 20.49% and Mean Fecal Coliform for Ray's Fork is estimated to increase by 46.9% between the 2030 RPA and the 2030 No-Build. The statement that "*water quality in these catchments was found to be unaffected by the Project...*", is inaccurate and not supported by the ICE report findings.

11 The Response to Comment #27 is similar to the discussion provided for Comment #2. EPA does not concur with the analysis on VMTs provided in the FEIS. The land use assumptions as it relates to a lack of access to sewer service in Response to Comment #29 is speculative. The ICE predicts 1,200 acres of low-density residential development, 700 more acres of medium density residential development and approximately 100 acres of industrial/office/institutional development compared to the 2030 No-Build. Considering
12 the 'development sprawl' that has characterized the eastern portion of the project study area for the last 10 years or more, this additional increase in development resulting from the new toll facility is believed by EPA to be very significant. Water supply, wastewater treatment, available 'greenspace', and other natural resources will be further strained in the project study area resulting from the construction of the new toll facility.

Responses to the EPA comments on Mobile Source Air Toxics (MSATs) are noted and EPA does not concur that a site specific analysis should not be performed for potential near roadway sensitive receptors such as schools identified from the DEIS. EPA has reviewed the updated information contained in Appendix E. NCTA and FHWA acknowledge there may be some localized MSAT increases and decreases but do not consider the near roadway aspects to sensitive receptors nor the potential for possible mitigation measures (such as noise walls) where schools will be in close proximity to the new toll facility. The same arguments concerning modeling deficiencies, health effects, future vehicle and fuel standards, national MSAT emission 'trends', etc. is repeated from previous NEPA documents and FHWA's 2006 Interim Guidance. The assessment criteria
13 for performing a quantitative MSAT analysis is not specifically supported by any relevant or creditable studies or research. This regional 'airshed' view is not believed to be fully relevant to near roadway sensitive receptors. Higher traffic volumes of 140,000 ADT or more is not related to the proximity of the sensitive receptors to the new facility or the likelihood of exposure, including duration and concentration. There are innumerable toxicological studies that document the 'cumulative and synergistic effects' of exposure to harmful chemicals. The air quality in the Metrolina area is already compromised for ozone and particulate matter. Sensitive populations are already at greater risk from exposure to MSATs. The analysis provided in the FEIS does not address this issue. Much of the emission assumptions for MSATs are based on VMT estimates that are not believed to be accurate. The 3 elementary schools and 1 high school cited on page E-6 continue to be locations where, at a minimum, NCTA and FHWA should commit to localized MSAT monitoring, including baseline information and post-construction. The Responses to Comments #33, #34 and #35 are also not responsive and the same guidance and DEIS positions on MSATs is cited.

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14 Regarding Response to Comment #32, EPA will provide specific recommendations on reducing construction emissions at future TEAC meetings. It is confusing as to why NCTA and FHWA were unable to obtain this requested information on low-sulfur diesel fuel sources, air pollution control devices for equipment and other construction issues prior to issuing a FEIS.

The Responses to Comments #37 and #38 regarding Farmlands furthers EPA's previous concerns regarding the loss of agriculture in the project study area and the significant impact the proposed project will have on suitable prime and unique farmlands. The 2007 Census of Agriculture information confirms the continued trends of losing farmlands in North Carolina, including those in Mecklenburg and Union Counties.
15 DSA D will convert 964 acres of prime farmland soils and Statewide and important farmland soils to non-agricultural uses. This represents 1.5 square miles of direct impact, exclusive of the indirect and cumulative effects from new development spurred by the project (The ICE predicts 1,200 acres of low-density residential development, 700 more acres of medium density residential development and approximately 100 acres of industrial/office/institutional development compared to the 2030 No-Build). This equates to potentially an additional 3.1 square miles of converting farmland soils and terrestrial forests to non-agricultural uses. The farm displacements comment in Section 1.3.2.4 is
16 speculative opinion and not supported by any actual investigation or inquiry into 'suitable farm replacement property'.

Part of the Response to Comment #39 is included in Section 1.3.4.3 regarding impacts to natural communities and wildlife. Under terrestrial wildlife the following statement is included in the FEIS: "*Habitat fragmentation also is expected to occur under the No-Build Alternative due to continued growth in population and development within Union County*". This comment is meant to detract from the actual impacts from the
17 proposed project. A new, 19.7-mile, multi-lane high speed "linear" facility in a suburban and rural setting and the indirect and cumulative effects of induced development is going to have a significant impact on habitat fragmentation. Wildlife mortality and vehicle collisions with large mammals such as deer are expected to be very substantial. The FEIS does not propose any form of mitigation for these serious safety and environmental issues.

EPA acknowledges the NCTA and FHWA's comments concerning air quality, North Carolina State Implementation Plan (NCSIP), and transportation conformity.

Jurisdictional Wetland and Stream Impacts

FHWA and NCTA's preferred alternative DSA D has 9,794 linear feet of perennial stream impact, 12, 269 linear feet of intermittent stream impact for a total of 22,063 linear feet of stream impact. However, these impacts are actually from the DEIS.
18 These impacts include 104 total stream crossings. Wetland impacts are estimated at 8.1 acres with 47 total wetland systems being impacted. There are 2.6 acres of pond impacts. Impacts were estimated using functional design construction limits with an additional 40-

18 foot buffer ("in accordance with NCDOT procedures"; Footnote in Table 1-8). Under the NEPA/Section 404 Merger process, preliminary designs are typically utilized and are more accurate than functional designs. Under the Merger process, calculations are based upon construction slope stakes and 25-foot buffers. EPA is uncertain as to the accuracy of the impact estimates as provided by NCTA for the proposed project. This is further illustrated on Pages 2-33 and 2-34 where impacts actually increased following the issuance of the DEIS. Service roads have added an additional 1,489 linear feet of total stream impact which 1,260 linear feet is expected to require compensatory mitigation.

19 Table 2-11 does not match the information contained in Table 1-8. The total length of streams requiring compensatory for the preferred alternative DSA D increased by 685 linear feet to total 13,235 linear feet from the issuance of the DEIS (Table 2-3). Overall, stream impacts after avoidance and minimization proposed by NCTA and FHWA increased by 1,020 linear feet (i.e., 22,063 linear feet for DSA D in DEIS and 23,083 linear feet for DSA D in FEIS). Design refinements identified on Page 2-34 resulted in a decrease of 709 linear of jurisdictional stream impacts, but the overall total stream impacts increased to 23,083 linear feet. Wetland impacts remained the same, pond impacts increased by 0.5 acres, the number of streams impacted increased by 3 to total 107 and the number of wetland systems impacted decreased by 1 to 46 systems. Most of the bridging decisions discussed during the TEAC meetings were based upon avoidance to human resources (Section 2.3 of the FEIS) and not to specifically reducing impacts to jurisdictional systems. Indirectly, there were some reductions to the increases resulting

20 from the inclusion of service roads and their anticipated impacts (Page 2-11 of the FEIS). However, the overall increase in stream impacts from the DEIS to the FEIS for the Preferred Alternative DSA D (and "the likely LEDPA"; Page 3-4) is approximately 4.6%. These stream impact 'reductions' are identified on Pages 2-11 and 2-12, Section 2.3.3 of the FEIS. EPA continues to have substantial environmental concerns that the DEIS did not provide an accurate assessment and analysis of the actual jurisdictional impacts. Other Section 404 avoidance and minimization measures such as steeper side slopes in jurisdictional areas, reduced median widths, reduced paved shoulders, the use of retaining walls, etc., were not addressed and should be considered during TEAC meetings and included in the Record of Decision (ROD).

Compensatory Mitigation and Other Special Conditions

21 The FEIS includes statements that compensatory mitigation is only required for intermittent streams scoring greater than 26 on the DWQ stream delineation forms. EPA understands that NCDWQ is requiring compensatory mitigation for all jurisdictional streams, including intermittent and perennial. The NCDWQ compensatory mitigation requirement for all intermittent streams was made effective in October of 2009. The 'conceptual mitigation plan' identified on Page 2-34 is not detailed. The EEP assets that are currently available or planned for this project are not included in the generalized discussion. The potential mitigation credits for the 4 sites are not listed. The statement

22 under 'Wetland Finding' that wetland impacts resulted in no net gain from the refined design is misleading. Jurisdictional stream impacts increased from the addition of service roads between the DEIS and the FEIS.

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23 The FEIS indicates on Page 2-33 that stream and wetland impacts are expected to decrease from functional designs to preliminary designs as the level of the design increases. The total impact to streams is 23,083 linear feet and the total wetland impact is estimated at 8.1 acres. Surface water or pond impacts are estimated at 3.1 acres. EPA continues to have substantial environmental concerns for water quality based on the magnitude of the impacts to waters of the U.S. North Fork Crooked Creek, South Fork Crooked Creek, Richardson Creek and Stewarts Creek are all on the 303(d) list of impaired waters.

24 The FEIS identifies that, "strict adherence to standard Best Management Practices (BMPs) including those for sedimentation and erosion control and the NCDOT Design Standards in Sensitive Watersheds, will minimize project impacts". A North Carolina State University (NCSU) study conducted for NCDOT potentially refutes this proposition, especially in very erosive Piedmont soils. This 3-year study showed that tons of sediment each year was lost from an NCDOT highway project despite the use of BMPs and that 2 of the 3 years of the study were in severe drought conditions. NCTA and FHWA seem to be anticipating these potential impacts to impaired waters using BMPs as 'a turbidity water quality testing program' for the main stem of Stewarts Creek will also be implemented to evaluate the performance of BMPs (Page 2-32). Testing is proposed upstream and downstream of the construction area as well as before, during and after construction. While EPA generally supports this testing program, the FEIS fails to provide an adequate response plan to potential turbidity problems once they are detected through sampling (testing). The FEIS places full responsibility of 'pollution' and implementation of BMPs on the selected contractor. EPA believes that a turbidity-testing program is also appropriate for other impacted 303(d) listed waters, including Richardson Creek, North Fork Crooked Creek and South Fork Crooked Creek

Indirect and Cumulative Effects Quantitative Analysis

25 Appendix I of Volume 3 includes the Quantitative Indirect and Cumulative Effects (ICE) Analysis on Water Quality. Also, Page 2-49 and 2-50 of the FEIS includes a summary of water modeling. The ICE analysis includes models and calculations based on various land use change assumptions for impervious cover changes. The FEIS report contains the same tables presented in the March 11, 2010, draft ICE report. Model estimates of annual stream flow, runoff and annual pollutant loadings of total nitrogen, total phosphorus, total suspended solids and fecal coliform. A Baseline condition, 2030 No-Build and 2030 Build scenarios were evaluated. EPA does believe that the following statement is germane to the direct action under consideration: "*In reality, substantial reductions in pollutant loadings could be attained as future development takes place if existing BMP regulations are enforced and BMPs are constructed and maintained properly*". Table 5 in the ICE report shows that Union County has no stormwater BMPs.

26 Indirect and cumulative effects including changes in impervious surface are expected to be very significant in several of the watersheds. The North Fork Crooked Creek, South Fork Crooked Creek, Richardson Creek and Stewarts Creek are 303(d) listed. One of the largest predicted ICE changes in pollutant loadings is to Stewarts

Creek. Obviously, new development and a lack of enforced BMPs have obviously caused the watershed to be impaired (Page 2-50). NCTA and FHWA propose no mitigation for the ICE resulting from the proposed project and the changes in impervious surfaces, development density and pollutant loadings to Stewarts Creek. An increase of 7% increase in impervious surface in the Stewarts Creek watershed could have increased
26 indirect and cumulative impacts on water quality that do not appear to be addressed in the ICE report or the FEIS. The North Fork Crooked Creek, South Fork Crooked Creek, and Richardson Creek are also 303(d) listed. Several other 303(d) listed streams will also have ICE that result in additional pollutant loadings, including Richardson Creek and Crooked Creek although the rate of change in impervious surface is predicted to be lower. NCTA and FHWA are proposing no mitigation for the ICE to water quality to these impaired waters. FHWA's position on not mitigating for ICE is included on Page 3-22 of the FEIS.

The ICE makes several assumptions in predicting future land use in the study area. One of the assumptions is that growth in Union County may be controlled by a moratorium on new sewer connections. There may be a moratorium implemented at the local level, however, the moratorium implemented by NCDWQ has subsequently been lifted. It is also NCDWQ's position that Union County's existing wastewater facilities currently have the capacity to accept additional waste loads. The ICE analysis does not
27 appear to reflect this changed condition and what effects it would have on growth projections through the design year of 2030. Table 1-7 provides active NPDES permits with discharges to streams in the project study area. The permitted flows are included for 6 of the 8 entities listed. Alvac and the City of Monroe are apparently not limited. EPA requests that the average daily flow versus capacity be provided in the ROD. This 'capacity versus use' issue should be further evaluated in the context of the ICE assumptions on development in the project study area. It is also important to note that all of the receiving streams shown in Table 1-7 are 303(d) listed for impairments. EPA has concerns regarding riparian buffers and what controls have actually been adopted, are being implemented and enforced through local governments.

EPA continues to have substantial environmental concerns resulting from the
28 indirect and cumulative effects of the recommended preferred alternative (RPA – DSA D) on water resources and the lack of proposed measures to address these impacts. These environmental concerns need to be addressed prior to the issuance of a ROD.

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COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	Response to EPA DEIS Comments	Many of NCTA and FHWA's responses to DEIS comments are a reiteration of its stated positions from the DEIS and during TEAC meetings. For example, Comment #2, Page B1-49 refers to 'likely would be overwhelmed' and 'would not provide for high-speed regional travel'. The responses are generic and are not supported by actual analysis.	An updated assessment of existing travel speeds along existing US 74 was undertaken as part of the Draft Supplemental Final EIS (*US 74 Corridor Travel Time Comparison*, HNTB, October 2013) and is summarized in **Section 1.2.4**. The study shows that even with all the improvements that have been recently made to existing US 74 (described in **Section 2.4**), current data indicates that average travel speeds along US 74 in the project area are limited to less than 50 mph, even during off-peak periods and free-flow conditions with very little to no congestion.
2	Response to EPA DEIS Comments	Another unresolved issue pertains to traffic forecasting where Comment #2 refers to a substantial increase in traffic volumes expected by 2035. However, vehicle miles traveled (VMT's) are expected to slightly decrease. The modeling and projections are not believed by EPA to be accurate or reasonable. The projected VMT decrease is partly defined on the position that people from the north will have a shorter route to the new toll facility. However, people who live south of existing US 74 will have a longer route to use the new toll facility. Population demographics actually show more people living in the south of existing US 74 than north of it. The other rationale for decreased VMT's is the 'slightly shorter route' of the new toll facility versus existing US 74. The ICE report also includes the potential for 1,300 new households in the project study area as well as hundreds of acres converted to commercial uses around new interchanges. This expected development would invariably increase VMT's as well.	The substantial increases in traffic volumes referred to in response to Comment #2 on page B1-49 in the Final EIS refers to a comparison of existing conditions and Year 2035 conditions along existing US 74. It is reasonable to expect substantial increases in traffic volumes to occur on existing US 74 from existing conditions to Year 2035. The Vehicle Miles Traveled (VMT) described in Final EIS Appendix E, Table E-2, are a comparison of Year 2035 No-Build Scenario with Year 2035 Build Scenarios across the entire transportation network, either for Union County or for the region as a whole. They are not a comparison to existing conditions or for just the US 74 corridor. The VMTs were calculated from an approved Metrolina regional travel demand model. There is no significant difference in regional or Union County-wide VMTs between the No-Build Scenario and the Preferred Alternative (DSA D) Build Scenario, with differences of one percent or less, with county-wide VMTs increasing slightly and regional VMTs decreasing slightly. As discussed in **Section 2.5.2** of the Draft Supplemental Final EIS, the latest regional travel demand model (MRM11v1.1) for the 2030 Build Scenario was run with the 2009 socioeconomic data revised to reflect the findings in the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013). As described in the *Monroe Connector/Bypass Traffic Forecast Summary* (HNTB, November 2013), a comparison of the 2030 Build Scenario VMTs generated from the regional model with the 2009 socioeconomic forecasts and with the revised 2009 socioeconomic forecasts showed that there would be approximately 3 percent more VMTs within Union County with the revised 2009 socioeconomic forecasts and an approximate 0 percent change across the entire region. These are considered minor differences that do not require additional analyses.
3	Response to EPA DEIS Comments	EPA notes that the information contained in Section 1.1.8 of the FEIS on existing roadway improvements that has occurred in the past ten years. This new information contradicts and corrects the statement made in the DEIS: "Few, if any access management techniques have been applied to this roadway" (Comment #3, B1-49). Obviously from the list provided on pages 1-5 and 1-6, a substantial number of individual	As described in **Section 2.4** of the Draft Supplemental Final EIS, numerous measures to improve traffic flow on existing US 74 have been implemented in the last several years by NCDOT and by developers of adjacent properties, including improvements at all the intersections recommended for improvement in the *US 74 Corridor Study* (Stantec, July 2007) commissioned by NCDOT Region 10. Many of these improvements are considered access management techniques. However, even with these improvements, current average travel speeds along existing US 74 (see **Section 1.2.4** of the Draft Supplemental Final EIS), are less

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COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
		improvements to existing US 74 have been made during the last ten years. With all of these improvements, including numerous turn lane additions by NCDOT for retail stores and other commercial facilities, it indicates that local planners were encouraging significant amounts of commercial and retail development along this regionally strategic east-west highway corridor (See also NCTA response to Comment #8). Local planners apparently did not believe that the US 74 corridor needed to be a regional high-speed facility as proposed by the NCDOT almost 20 years ago nor did they incorporate reasonable access and congestion management techniques in their local planning and zoning for these new commercial and retail facilities. Apparently, the local assumption was that NCDOT and FHWA would build Union County a new Monroe bypass as was initially proposed back in the late 1980's.	than 50 mph during peak travel periods. These improvements, while providing some short-term benefits, would be overwhelmed by projected 2035 traffic in the corridor, and would not provide long-term benefit nor meet the purpose and need for the Monroe Connector/Bypass project. In the 1970's the NCDOT developed a Thoroughfare Plan for the City of Monroe and its vicinity to serve as a guide to solving existing and anticipated traffic problems in the area. The plan was mutually adopted by NCDOT, the City of Monroe and Union County between 1980 and 1983. This plan highlighted improvements to major and minor roadways and included several new roadways including a northern bypass of US 74 around Monroe. In the 1990's revisions to this plan were considered to include a connector route from the proposed bypass to the Charlotte Outer Loop (I-485). The Environmental Assessment of the original Monroe Bypass was approved in March 1996 and a Finding of No Significant Impact was signed in March 1997. A decision to rescind these documents was not made until January 2006. As many of the changes occurred along US 74, there was no indication at that time that a long delay associated with the project would occur or that an entirely new environmental study would need to be performed. Local governments are typically concerned with development of their local tax base as a priority. Given the long history of this project, it is unsurprising that many localities have allowed intense development of the parcels fronting US 74 with the expectation that the Monroe Connector/Bypass would eventually serve as the through traffic corridor for the area.
4	Alternatives Analysis	Regarding the Response to Comment #11, EPA continues to disagree with Quantitative Third Screening that was used for the Detailed Study Alternative and the use of a 'conceptual right of way' and GIS level data in lieu of actual wetland and stream delineations. The FEIS response to EPA's DEIS comment has not been adequately addressed.	The previous response to USEPA comment #11 in Appendix B of the Final EIS regarding the quantitative screening is still valid. The final methodology for Alternative screening was discussed at the April 18, 2007 Turnpike Environmental Agency Coordination (TEAC) and results of the first and second qualitative screening and 3rd quantitative screening were discussed at the 5/15/07, 9/27/07 and 10/17/07 TEAC meetings. The minutes of these meetings do not reflect USEPA raising any concern with the proposed methodology. USEPA provided NCTA with a letter on 12/4/07 containing their comments to the Draft Alternatives Development and Analysis Report. In these comments, EPA expressed a general comment on the precision of the data used at the preliminary screening level. For example, the screening analysis reported stream impacts to the foot and wetland and pond impacts to the tenth of an acre. EPA stated they believe "this level of accuracy of impacts to natural resource is neither necessary for the purpose of alternative screening nor required for DEIS comparison purposes." EPA suggested FHWA and NCTA "consider reasonable 'rounding' to significant estimates at this stage in planning. Rounding the values would not have changed the relative comparison conducted in the third quantitative screening.

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COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
5	Alternatives Analysis	Similarly, Responses to Comments #12 and #13 do not address the increases and decreases in residential and business relocations and jurisdictional impacts.	See response to comment #4 in the Environmental Protection Agency Letter (a005). Changes in residential and business relocations and jurisdictional impacts between the quantitative third screening Preliminary Study Alternatives and the Detailed Study Alternatives were related to changes in the designs (which would have been similar for all Preliminary Study Alternatives moving into Detailed Study Alternatives), continued updates to GIS data, and use of surveyed wetlands and streams for calculating impacts from the Detailed Study Alternatives.
6	Economic Analysis	For Response to Comment #15, there is no socio-economic analysis to local businesses and retail stores along US 74 that will potentially see far less business once the new toll facility is constructed.	A socioeconomic analysis is not required. Even with the Monroe Connector/Bypass in place, traffic on existing US 74 is projected to remain high. Diverting through traffic onto the Monroe Connector/Bypass will provide more opportunity for local traffic to access businesses along existing US 74.
7	Jurisdictional Resources	Response to Comment #18 does not include recommendations for potential avoidance and minimization by reducing the 70-foot proposed median and 12-foot paved outside shoulders. There is no specific recommendation as to what 'additional opportunities for impact minimization and cost reduction' will be and what opportunity for agency input will be considered during the final design.	The "Project Details" section of the Design-Build Request for Proposal (RFP) called for the use of a 46-foot median on new location portions of the roadway. The RFP also identified the reduction of the 12-foot (4-foot paved) inside shoulders to 6-foot (4-foot paved) and allows for a maximum cut and fill slope of 2:1 (H:V). Any variations in the functional design and/or construction methods that nullify any decisions reached between the NCDOT and the Environmental Agencies; and/or require additional coordination with the Environmental Agencies shall be the responsibility of the selected Design-Build Team.
8	Jurisdictional Resources	The Response to Comment #19 concerning compensatory mitigation is not detailed or responsive to the specific issues (See comments below). The conceptual mitigation plan referenced in Response to Comment #20 and included in Section 2.5.4.4 is not detailed. Essentially, NCTA and FHWA state that with the exception of possibly 4 on-site mitigation opportunities, all compensatory mitigation will be provided through the in-lieu fee program of Ecosystem Enhancement Program (EEP) and they have been regularly apprised of anticipated mitigation requirements. Unfortunately, NCTA and FHWA have been going on the assumption that only some of the intermittent stream impacts will require compensatory mitigation. This is no longer the case, as the North Carolina Division of Water Quality now requires mitigation for all intermittent streams. The conceptual mitigation plan is actually a technical memorandum that is incorporated by reference to the FEIS (This document should have been included in one of the appendices to the FEIS). There is no information provided	NCDOT and FHWA are aware of the changes to stream mitigation requirements. In a June 24, 2010 letter to USACE and NCTA (NCDOT), the Ecosystem Enhancement Program confirmed that they will provide all compensatory stream (intermittent and perennial) and riparian wetland mitigation for this project. A copy of this letter can be found in **Appendix C** of this Draft Supplemental Final EIS. Mitigation is discussed in **Section 4.4.4** of the Draft Supplemental Final EIS. The conceptual mitigation plan is incorporated into the Draft Supplemental Final EIS by reference and can be found on the project website: http://www.ncdot.gov/projects/monroeconnector/download/monroe_FEIS_ConceptualMitigation.pdf

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		through the EEP as to what mitigation assets are available or what is being planned for the impacted watershed basins. This deficiency of a detailed mitigation proposal is significant and needs to be resolved prior to the issuance of a ROD. Response to Comment #24 is also not responsive. The resource and permitting agencies have not been given the opportunity to provide a detailed field review of the 4 potential sites. EPA continues to have substantial environmental concerns for the lack of detail concerning compensatory mitigation.	
9	Jurisdictional Resources	NCTA and FHWA's response to Comment #22 is not responsive and there is no estimate of potential impacts to jurisdictional resources from anticipated borrow pits and from waste disposal. This potentially substantial environmental issue is being deferred to later design work and potentially after the issuance of the Record of Decisions (ROD).	Until final design plans are completed, the exact amount of borrow and waste materials associated with this project cannot be determined. As previously stated, the Design-Build team will be required to acquire applicable permits relative to borrow pits and comply with requirements for borrow pits, dewatering, and any temporary work conducted in jurisdictional areas. This activity will be required regardless of the selected alternative.
10	Water Quality	EPA does not agree with the Response to Comment #23 and the ICE findings. Contrary to the response provided, there are anticipated water quality issues associated with the proposed project, and minimally, to the 303(d) listed Stewarts Creek. Pollutant loadings for the six catchments did not remain 'unchanged' between the 2030 No-Build and the 2030 Recommended Preferred Alternative (RPA) scenarios. Table 17 of the ICE shows Total Nitrogen (TN) for lower Richardson's Creek to be 1.52% higher between the 2030 RPA and 2030 No-Build. Total Phosphorus (TP) shown in Table 18 is also increased by 2.52% and 4.50% for Stewarts Creek and Richardson's Creek, respectively. Table 19 likewise shows four catchments with increased Total Suspended Solid (TSS) between 1.45% and 2.20% between 2030 RPA and the 2030 No-Build. Referring to Tables 20 and 21, Total Fecal Coliform for Richardson's Creek is estimated to increase by 20.49% and Mean Fecal Coliform for Ray's Fork is estimated to increase by 46.9% between the 2030 RPA and the 2030 No-Build. The statement that "*water quality in these catchments was found to be unaffected by the Project…*" is inaccurate and not supported by the ICE report findings.	The previous response to Draft EIS Comment #23 was clarified in section 2.5.5.2 of the Final EIS. "For the FLUSA as a whole, minor increases in stream flow, runoff, and pollutant loadings are confined to the six catchments intersected by the Preferred Alternative: Crooked, Richardson (Middle), Rays Fork, Stewarts, Richardson (Lower), and Salem Creeks. Of these catchments, Stewarts had the largest change in development density between the No Build and Build scenarios. Stewarts also had the largest amount of new development between 2030 No Build and Build scenarios. However, Richardson Creek (Lower) would experience the largest percent increases in runoff (5.97 percent increase between 2030 No Build and Build scenarios) and pollutant loads because the development would largely take place in an urban portion of the catchment. Water quality in the remainder of the FLUSA (13 catchments) was found to be unaffected by the Preferred Alternative, as the estimated runoff, stream flow and pollutant loadings for the catchments remained unchanged between the 2030 No Build and Build scenarios." It was recognized that there would be some change to six catchments however the remaining catchments in the study area would not be affected. The percent changes in pollutant loading expected between the Build and No Build scenarios was provided in the *Indirect and Cumulative Effects Water Quality Analysis* (PBS&J, April 2010) which is included as Appendix I of the Final EIS. Under the Preferred Alternative, fecal coliform loads are projected to increase in areas of high-density development. The increases correspond to increased urban runoff. The effect in the Richardson Creek (Lower) watershed is especially pronounced because a relatively large amount of urban development is projected in a relatively small watershed. Implementation of

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			structural BMPs, which were not considered in the ICE analysis but are required throughout much of the study area for development in excess of one acre, will greatly reduce the amount of fecal coliform reaching streams and water bodies. As explained in the *Indirect and Cumulative Effects Quantitative Analysis Update* (Baker, November 2013), with regard to percent impervious cover as an indicator for water quality effects and effects to aquatic species, findings show only a one percent difference in percent impervious cover between the 2030 Build and 2030 No-Build scenarios for the study area as a whole. With regard to individual watersheds, findings show no incremental difference from No-Build to Build scenarios for 11 of the 18 watersheds, including Goose Creek and Sixmile Creek. For the remaining seven watersheds, the Build scenario will have a one to three percent greater change in impervious surfaces as compared to the change predicted for the No-Build scenario. Overall, as these results are very similar to the results of the original Quantitative ICE, additional water quality modeling is not necessary as these differences are not large enough to see substantial differences compared to the prior water quality results. It is important to note that riparian buffers were the only BMPs considered in the ICE analysis. Implementation of other BMPs, such as bioretention basins, stormwater wetlands, sand filters, and others listed in the NCDWQ Stormwater Best Practices Manual (2012), requires site-specific information unavailable at this time. However, it can definitively be stated that the post-construction stormwater ordinances of Mecklenburg County, the City of Monroe, and the Towns of Indian Trial and Stallings require developments in excess of one acre to meet minimum stormwater management standards. In all cases, stormwater treatment systems at such developments must be designed for a minimum 85 percent average annual removal of total suspended solids, which also removes sizable percentages of total nitrogen, total phosphorus, and fecal coliform. As such, substantial pollutant load reductions beyond those provided by the riparian buffers simulated in the ICE would be realized if the EPA Phase I and Phase II Stormwater Rules (in effect through 99 percent of the study area) and locally-mandated stromwater treatment requirements are enforced. The North Carolina Department of Environmental and Natural Resources – Division of Water Quality (DWQ) (now called the Division of Water Resources) will be provided this data for their consideration during the Section 401 Water Quality Certification process, and to date they have not raised any concerns with this issue.
11	Traffic Forecasts	The Response to Comment #27 is similar to the discussion provided for Comment #2. EPA does not concur with the analysis on VMTs provides in the FEIS.	See response to Comment #2 in this letter (a005).

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12	Indirect and Cumulative Effects	The land use assumptions as it relates to a lack of access to sewer service in Response to Comment #29 is speculative. The ICE predicts 1,200 acres of low-density residential development, 700 more acres of medium density residential development and approximately 100 acres of industrial/office/institutional development compared to the 2030 No-Build. Considering the 'development sprawl' that has characterized the eastern portion of the project study area for the last 10 years or more, this additional increase in development resulting from the new toll facility is believed by EPA to be very significant. Water supply, wastewater treatment, available 'greenspace', and other natural resources will be further strained in the project study area resulting from the construction of the new toll facility.	As presented in the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), and summarized in **Section 4.5** of the Draft Supplemental Final EIS, the ICE predicts additional development to occur as a result of the project, in addition to the direct addition of roadway acreage from the new highway. Any additional development attributable to the Build Scenario will likely add to demand for water and wastewater services and may require development of previously undeveloped areas.
13	Air Quality	Responses to the EPA comments on Mobile Source Air Toxics (MSATs) are noted and EPA does not concur that a site specific analysis should not be performed for potential near roadway sensitive receptors such as schools indentified from the DEIS. EPA has reviewed the updated information contained in Appendix E. NCTA and FHWA acknowledge there may be some localized MSAT increases and decreases but do not consider the near roadway aspects to sensitive receptors nor the potential for possible mitigation measures (such as noise walls) where schools will be in close proximity to the new toll facility. The same arguments concerning modeling deficiencies, health effects, future vehicle and fuel standards, national MSAT emission 'trends', etc. is repeated from previous NEPA documents and FHWA's 2006 Interim Guidance. The assessment criteria for performing a quantitative MSAT analysis is not specifically supported by any relevant or creditable studies or research. This regional 'airshed' view is not believed to be fully relevant to near roadway sensitive receptors. Higher traffic volumes of 140,000 ADT or more is related to the proximity of the sensitive receptors to the new facility or the likelihood of exposure, including duration and concentration. There are innumerable toxicological studies that document the 'cumulative and synergistic effects' of exposure to harmful chemicals. The air quality in the Metrolina area is already	Air quality information and analyses, including MSATs, were reviewed for the Draft Supplemental Final EIS, as summarized in **Section 4.2.2**. It was determined the MSAT analysis presented in Section 1.3.2.2 and Appendix E of the Final EIS is still valid. As stated in Appendix E of the Final EIS, "Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of the NEPA. Nonetheless, air toxics concerns continue to be raised on highway projects during the NEPA process. Even as the science emerges, FHWA is duly expected by the public and other agencies to address MSAT impacts in our environmental documents. The FHWA, USEPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this emerging field. While this research is ongoing, FHWA requires each NEPA document to qualitatively address MSATs and their relationship to the specific highway project through a tiered approach. Since publication of the Final EIS, FHWA issued new MSAT Guidance on December 6, 2012 (*Interim Guidance on Mobile Source Air Toxic Analysis in NEPA*), updating their September 30, 2009 Guidance cited in the Final EIS. However, this updated guidance does not change any project analysis thresholds, recommendations, or guidelines. This approach to evaluating MSATs is consistent with and meets the requirements of 40 CFR 1502.22 which requires that "When an agency is evaluating reasonably foreseeable significant

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		compromised for ozone and particulate matter. Sensitive populations are already at greater risk from exposure to MSATs. The analysis provided in the FEIS does not address this issue. Much of the emission assumptions for MSATs are based on VMT estimates that are not believed to be accurate. The 3 elementary schools and 1 high school cited on page E-6 continue to be locations where, at a minimum, NCTA and FHWA should commit to localized MSAT monitoring, including baseline information and post-construction. The Responses to Comments #33, #34 and #35 are also not responsive and the same guidance and DEIS positions on MSATs is cited.	adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking." In FHWA's view, existing information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action. It is FHWA's opinion that responses to Draft EIS comments 33, 34 and 35 are complete and responsive and do not require additional explanation.
14	Air Quality	Regarding Response to Comment #32, EPA will provide specific recommendations on reducing emissions at future TEAC meetings. It is confusing as to why NCTA and FHWA were unable to obtain this requested information on low-sulfur diesel fuel sources, air pollution control devices for equipment and other construction issues prior to issuing a FEIS.	The NCDOT will provide the Design-Build Team any additional information that USEPA can offer specific to the following issues: 1) Availability of low sulfur fuel for construction equipment and information on cost differential; 2) Information on the latest air pollution control devices on construction equipment and whether all equipment needs to be new or be retrofitted; 3) A suggested reasonable amount of time for equipment to idle versus the effect of equipment restarts; and 4) Examples of other forms of dust control that have been used successfully on large construction projects (e.g. foam).
15	Farmlands	The Responses to Comments #37 and #38 regarding Farmlands furthers EPA's previous concerns regarding the loss of agriculture in the project study area and the significant impact the proposed project will have on suitable prime and unique farmlands. The 2007 Census of Agriculture information confirms trends of losing farmlands in North Carolina, including those in Mecklenburg and Union Counties. DSA D will convert 964 acres of prime farmland soils and Statewide and important farmland soils to non-agricultural uses. This represents 1.5 square miles of direct impact, exclusive of the indirect and cumulative effects from new development spurred by the project (The ICE predicts 1,200 acres of low-density residential development, 700 more acres of medium density residential development and approximately 100 acres of industrial/office/institutional development compared to the 2030 No-Build). This equates to potentially an additional 3.1 square miles of converting farmland soils and terrestrial forests to non-agricultural uses.	This project meets the requirements of Farmland Protection Policy Act of 1981 (FPPA), 7 U.S.C. 4201, as amended, and its implementing regulations, 7 CFR Part 658. Potential farmland conversion was coordinated with the United States Department of Agriculture – Natural Resources and Conservation Services (NRCS). As part of the farmland evaluation, NRCS form AD1006 was completed. Sites receiving a total score of 160 points on this form are given increasingly higher levels of consideration for protection (7 CFR 658.4). None of the DSAs studied as part of this project received a score higher than 160 points. Farmland was considered in the evaluation of all the DSAs, and in the selection of the Preferred Alternative. The Preferred Alternative has among the lowest impacts to Prime farmland soils, agricultural land and forests as discussed in **Section 4.2.3** of the Draft Supplemental Final EIS.

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16	Farmland	The farm displacements comment in Section 1.3.2.4 is speculative opinion and not supported by any actual investigation or inquiry into 'suitable farm replacement property'.	The presence of suitable farm replacement was identified through the research associated with the *Relocation Reports for the Monroe Connector/Bypass* (Carolina Land Acquisition, January 2009). Additional information can be found in **Section 4.2.3** of the Draft Supplemental Final EIS.
17	Wildlife	Part of the Response to Comment #39 is included in Section 1.3.4.3 regarding impacts to natural communities and wildlife. Under terrestrial wildlife the following statement is included in the FEIS: "*Habitat fragmentation also is expected to occur under the No-Build Alternative due to continued growth in population and development within Union County*'. This comment is meant to detract from the actual impacts from the proposed project. A new, 19.7-mile, multi-lane speed "linear" facility in a suburban and rural setting and the indirect and cumulative effects of induced development is going to have a significant impact on habitat fragmentation. Wildlife mortality and vehicle collisions with large mammals such as deer are expected to be very substantial. The FEIS does not propose any form of mitigation for these serious safety and environmental issues.	Forested habitat fragmentation was addressed through a patch analysis which measured the amount of edge between forested patches and developed patches in the Baseline and future conditions. This analysis is described in Section 5.7 of the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), and summarized in **Section 4.5.5.5** of the Draft Supplemental Final EIS. Any new location facility will have some impacts on habitat fragmentation. The ICE concluded that induced development would not have a significant effect on forest fragmentation compared to the No-Build scenario. The North Carolina Wildlife Resources Commission specifically noted that the extensive use of bridge crossings should help limit wildlife mortality from road collisions by providing numerous safe crossings under the proposed road.
18	Jurisdictional Resources	FHWA and NCTA's preferred alternative DSA D has 9,794 linear feet of perennial stream impact, 12,269 linear feet of intermittent stream impact for a total of 22,063 linear feet of stream impact. However, these impacts are actually from the DEIS. These impacts include 104 total stream crossings. Wetland impacts are estimated at 8.1 acres with 47 total wetland systems being impacted. There are 2.6 acres of pond impacts. Impacts were estimated using functional design construction limits with an additional 40-foot buffer ("in accordance with NCDOT procedures"; Footnote in Table 1-8). Under the NEPA/Section 404 Merger process, preliminary designs are typically utilized and are more accurate than functional designs. Under the Merger process, calculations are based upon construction slope stakes and 25-foot buffers. EPA is uncertain as to the accuracy of the impact estimates as provided by NCTA for the proposed project. This is further illustrated on Pages 2-33 and 2-34 where impacts actually increased following the issuance of the DEIS. Service roads have	Updated jurisdictional resource impacts for the Preferred Alternative are found in **Section 4.4.4** of the Draft Supplemental Final EIS. As stated in Section 9.4.2 of the Section 6002 Coordination Plan prepared for this project, "*functional design will be used as the basis for comparing the impacts of the alternatives in the DEIS (known as the Detailed Study Alternatives) and will be used for developing the cost estimates presented in the DEIS*." This matter was previously discussed at the December 15, 2006 TEAC meeting and as documented in the minutes, "*Several of the agencies expressed general support for this approach, noting that in most cases an increased level of design would not affect the decision on a Preferred Alternative and completing preliminary design on multiple alternatives is often an inefficient use of time and funds.*" NCDOT procedure *Wetland Stream and Riparian Buffer Impact Calculations* (September 2006) states that for a Functional Design level of detail, impacts will be computed from slope stake limits plus an additional 40 feet to each side of the slope stake limit. Refined impacts of the preferred alternative based on the final design will be reflected in the final permit application.

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		added an additional 1,489 linear feet of total stream impact which 1,260 linear feet is expected to require compensatory mitigation.	
19	Jurisdictional Resources	Table 2-11 does not match the information contained in Table 1-8. The total length of streams requiring compensatory for the preferred alternative DSA D increased by 685 linear feet to total 13,235 linear feet from the issuance of the DEIS (Table 2-3). Overall, stream impacts after avoidance and minimization proposed by NCTA and FHWA increased by 1,020 linear feet (i.e., 22,063 linear feet for DSA D in DEIS and 23,083 linear feet for DSA D in FEIS). Design refinements identified on Page 2-34 resulted in a decrease of 709 linear feet of jurisdictional stream impacts, but the overall total stream impacts increased to 23,083 linear feet. Wetland impacts remained the same, pond impacts increased by 0.5 acres, the number of streams impacted increased by 3 to total 107 and the number of wetland systems impacted decreased by 1 to 46 systems.	The data presented in Tables 1-8 and 2-11 of the Final EIS represent two different scenarios. Table 1-8 reflects impacts associated with the DSAs as presented in the Draft EIS. Table 2-11 reflects impacts of the Preferred Alternative as a result of the addition of service roads, design refinements and updated field work. Jurisdictional impacts are discussed in **Section 4.4.4** of the Draft Supplemental Final EIS.
20	Jurisdictional Resources	Most of the bridging decisions discussed during the TEAC meetings were based upon avoidance to human resources (Section 2.3 of the FEIS) and not to specifically reducing impacts to jurisdictional systems. Indirectly, there were some reductions to the increases resulting from the inclusion of service roads and their anticipated impacts (Page 2-11 of the FEIS). However, the overall increase in stream impacts from the DEIS to the FEIS for the Preferred Alternative DSA D (and "the likely LEDPA"; Page 3-4) is approximately 4.6%. These stream impact 'reductions' are identified on Pages 2-11 and 2-12, Section 2.3.3 of the FEIS. EPA continues to have substantial environmental concerns that the DEIS did not provide an accurate assessment and analysis of the actual jurisdictional impacts. Other Section 404 avoidance and minimization measures such as steeper side slopes in jurisdictional areas, reduced median widths, reduced paved shoulders, the use of retaining walls, etc., were not addressed and should be considered during TEAC meetings and included in	See response to Comments #7and 18 in this letter (a005).

Table A-11: US Environmental Protection Agency

Document: a005 letter dated July 12, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
		the Record of Decision (ROD).	
21	Jurisdictional Resources	The FEIS includes statements that compensatory mitigation is only required for intermittent streams scoring greater than 26 on the DWQ stream delineation forms. EPA understands that NCDWQ is requiring compensatory mitigation for all jurisdictional streams, including intermittent and perennial. The NCDWQ compensatory mitigation requirement for all intermittent streams was made effective in October of 2009. The 'conceptual mitigation plan' identified on Page 2-34 is not detailed. The EEP assets that are currently available or planned for this project are not included in the generalized discussion.	See response to Comment #8 in this letter (a005)
22	Jurisdictional Resources	The potential mitigation credits for the 4 sites are not listed. The statement under 'Wetland Finding' that wetland impacts resulted in no net gain from the refined design is misleading. Jurisdictional stream impacts increased from the addition of service roads between the DEIS and the FEIS.	See response to Comment #8 in this letter (a005).
23	Jurisdictional Resources	The FEIS indicates on Page 2-33 that stream and wetland impacts are expected to decrease from functional designs to preliminary designs as the level of the design increases. The total impact to streams is 23,083 linear feet and the total wetland impact is estimated at 8.1 acres. Surface water or pond impacts are estimated at 3.1 acres. EPA continues to have substantial environmental concerns for water quality based on the magnitude of the impacts to waters of the U.S. North Fork Crooked Creek, South Fork Crooked Creek, Richardson Creek and Stewarts Creek are all on the 303(d) list of impaired waters.	As the project moves into final design, it is anticipated that estimated impacts to wetlands and streams would decrease as the buffer required to be included in the calculations is decreased. As discussed in **Section 4.4.4** of the Draft Supplemental Final EIS, prior to the Project's Record of Decision being rescinded, a Section 401/404 Permit application was submitted to the USACE and a permit was granted on April 15, 2011. The permit was revoked by the USACE on April 17, 2013 since NCDOT is reevaluating data as part of the NEPA process (as documented in this Draft Supplemental Final EIS). However, the original permit authorized impacts to 18,658 linear feet of stream impact, 7.66 acres of jurisdictional wetland impacts, and 3.12 acres of pond impacts, which are less than or equal to the impacts indicated in the Final EIS. Also, see response to Comment #10 in this letter (a005).
24	Water Quality	The FEIS identifies that, 'strict adherence to standard Best Management Practices (BMPs) including those for sedimentation and erosions control and the NCDOT Design Standards in Sensitive Watersheds, will minimize project impacts". A North Carolina State University (NCSU) study	The NCSU study cited *"Improving construction site runoff quality with fiber check dams and polyacrylamide"(*Richard A. McLaughlin, Scott E. King and Greg D. Jennings, North Carolina State University, March 2009) does not conclude that the current NCDOT BMPs were not effective, but rather identified additional methods which may perform better for similar costs. As a result of this study, NCDOT is in the process of incorporating natural fiber check dams

Table A-11: US Environmental Protection Agency

Document: a005 letter dated July 12, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
		conducted for NCDOT potentially refutes this proposition especially in very erosive Piedmont soils. This 3-year study showed that tons of sediment each year was lost from an NCDOT highway project despite the use of BMPs and that 2 of the 3 years of the study were in severe drought conditions. NCTA and FHWA seem to be anticipating these potential impacts to impaired waters using BMPs 'as a turbidity water quality testing program' for the main stem of Stewarts Creek will also be implemented to evaluate the performance of BMPs (Page 2-32). Testing is proposed upstream and downstream of the construction area as well as before, during and after construction. While EPA generally supports this testing program, the FEIS fails to provide an adequate response plan to potential turbidity problems once they are detected through sampling (testing). The FEIS places full responsibility of 'pollution' and implementation of BMPs on the selected contractor. EPA believes that a turbidity-testing program is also appropriate for other impacted 303(d) listed waters, including Richardson Creek, North Fork Crooked Creek and South fork Crooked Creek.	enhanced with polyacrylamide as the new BMP in road construction. http://www.ncsu.edu/project/calscommblogs/news/archives/2009/04/nc_state_study.html The Project Commitments section of the Draft Supplemental Final EIS lists several commitments related to water quality.
25	Indirect and Cumulative Effects	Appendix I of Volume 3 includes the Quantitative Indirect Cumulative Effects (ICE) Analysis on Water Quality. Also, Page 2-49 and 2-50 of the FEIS includes a summary of water modeling. The ICE analysis includes models and calculations based on various land use change assumptions for impervious cover changes. The FEIS report contains the same tables presented in the March 11, 2010, draft ICE report. Model estimates of annual stream flow, runoff and annual pollutant loadings of total nitrogen, total phosphorus, total suspended solids and fecal coliform. A Baseline condition, 2030 No-Build and 2030 Build scenarios were evaluated. EPA does believe that the following statement is germane to the direct action under consideration: "*in reality, substantial reductions in pollutant loadings could be attained as future development takes place if existing BMP regulations are enforced and BMPs are constructed and maintained properly*". Table 5 in the ICE report shows that Union County has no stormwater BMPs.	As included in Table 5 of the *Indirect and Cumulative Effects Water Quality Analysis* (PBS&J, April 2010), which is still valid for this project, the Towns of Stallings, Indian Trail, and Monroe have developed best management practices (BMPs) for projects within their jurisdictions. At a minimum, BMPs developed by NCDOT will be utilized throughout the project.

Table A-11: US Environmental Protection Agency

Document: a005 letter dated July 12, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
26	Indirect and Cumulative Effects	Indirect and cumulative effects including changes in impervious surface are expected to be very significant in several of the watersheds. The North Fork Crooked Creek, South Fork Crooked Creek, Richardson Creek and Stewarts Creek are 303(d) listed. One of the largest predicted ICE changes in pollutant loadings is to Stewarts Creek. Obviously, new development and a lack of enforced BMPs have obviously caused the watershed to be impaired (Page 2-50). NCTA and FHWA propose no mitigation for the ICE resulting from the proposed project and the changes in impervious surfaces, development density and pollutant loading to Stewarts Creek. An increase of 7% increase in impervious surface in the Stewarts Creek watershed could have increased indirect and cumulative impacts on water quality that do not appear to be addressed in the ICE report or the FEIS. The North Fork Crooked Creek, South Fork Crooked Creek, and Richardson Creek are also 303(d) listed. Several other 303(d) listed streams will also have ICE that result in additional pollutant loadings, including Richardson Creek and Crooked Creek although the rate of change in impervious surface is predicted to be lower. NCTA and FHWA are proposing no mitigation for the ICE to water quality to these impaired waters. FHWA's position on not mitigating for ICE is included on Page 3-22 of the EIS.	See response to comment #10 in this letter (a005). The *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) has estimated that the incremental effect of the 2030 Build Scenario will be a one percent increase in impervious surface throughout the study area as compared to the change predicted for the 2030 No-Build Scenario. This will not be a significant impact. As noted, FHWA's legal responsibility for mitigating project impacts can be found in 23 CFR 771.105(d).
27	Indirect and Cumulative Effects	The ICE makes several assumptions in predicting future land use in the study area. One of the assumptions is that growth in Union County may be controlled by a moratorium on new sewer connections. There may be a moratorium implemented at the local level, however, the moratorium implemented by NCDWQ has subsequently been lifted. It is also NCDWQ's position that Union County's existing watershed facilities currently have the capacity to accept additional waste loads. The ICE analysis does not appear to reflect this changed condition and what effects it would have on growth projections through the design year of 2030. Table 1-7 provides active NPDES permits with discharges to streams in the project study area. The permitted flows are included for 6 of the 8 entities listed. Alvac and the City of Monroe are apparently not limited. EPA requests that the	It is noted in the *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013) that these water and sewer moratoria were rescinded in 2012. Anticipated areas to be served by water and wastewater utilities were considered in both the No Build and Build Scenarios when allocating forecasted growth and estimating density of development. Areas that are not expected to be served by wastewater would have limited ability to increase density beyond low density residential. Per interviews with local planners, certain communities, such as Unionville and Fairview, have no intention of increasing density of development beyond low density residential even if water and wastewater services are provided. Stream buffer regulations and their incorporation into the indirect and cumulative effects analysis are described in Section 4.1 of the *Indirect and Cumulative Effects Quantitative Analysis Update.* Most stream buffer regulations come from the post-construction ordinances developed by localities in concert with NCDENR. Planners and other officials interviewed were unaware of any violations of these buffers. See Appendix A of the *Indirect and Cumulative*

Table A-11: US Environmental Protection Agency

Document: a005 letter dated July 12, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
		average daily flow versus capacity be provided in the ROD. This 'capacity versus use' issue should be further evaluated in the context of the ICE assumption on development in the project study area. It is also important to note that all of the receiving streams shown in Table 1-7 are 303(d) listed for impairments. EPA has concerns regarding riparian buffers and what controls have actually been adopted, are being implemented and enforced through local governments.	*Effects Quantitative Analysis Update* for responses from local officials regarding stream buffer regulations and their enforcement.
28	Indirect and Cumulative Effects	EPA continues to have substantial environmental concerns resulting from the indirect and cumulative effects of the recommended preferred alternative (RPA – DSA D) on water resources and the lack of proposed measures to address these impacts. These environmental concerns need to be addressed prior to the issuance of a ROD.	Concerns expressed in the EPA's letter (a005) have been addressed in the responses provided to comments 1 through 27. The *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013), summarized in **Section 4.5** of the Draft Supplemental Final EIS, provides an updated assessment of indirect and cumulative effects of the project. The NCDOT must again obtain a Section 404 permit from the USACE and a Section 401 Water Quality Certification from the NCDWQ prior to project construction. Mitigation needed for these permits will be determined by the USACE and the NCDWQ.

a006

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: UNION
MECKLENBURG

F05: RAILROADS

STATE NUMBER: 10-E-4220-0435
DATE RECEIVED: 06/10/2010
AGENCY RESPONSE: 07/07/2010
REVIEW CLOSED: 07/12/2010

CLEARINGHOUSE COORDINATOR
CC&PS - DIV OF EMERGENCY MANAGEMENT
FLOODPLAIN MANAGEMENT PROGRAM
MSC # 4719
RALEIGH NC

JUL 2010
RECEIVED
Secretary's Office
DOA

RECEIVED
JUN 11 2010
N.C. Floodplain Mapping Program

REVIEW DISTRIBUTION

CC&PS - DIV OF EMERGENCY MANAGEMENT
CENTRALINA COG
DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

PROJECT INFORMATION

APPLICANT: State of N.C. Turnpike Authority
TYPE: National Environmental Policy Act
Final Environmental Impact Statement

DESC: Improvements in the Monroe Connector/Bypass from I-485 to US 74 in the vicinity of the Town of Marshville in Union Co. TIP Nos. R-3329 & R-2559

CROSS-REFERENCE NUMBER: 02-E-4220-0309 04-E-4220-0332 07-E-4220-0235 09-E-4220-0292

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: ☐ NO COMMENT ☒ COMMENTS ATTACHE

SIGNED BY: [signature] DATE: 7/9/10

1 Project impacts numerous regulated Special Flood Hazard Areas. Coordination with NCDOT Hydraulics Unit should be made to ensure Compliance with EO 11988 and the FEMA NFIP REGULATIONS - 44 CFR, AND N.C. EO 123 ARE MET Through the MOA between NCDOT and NCEM OGTM.

Table A-12: NC Department of Crime Control and Public Safety – Floodplain Management Program

Document: a006 letter dated July 9, 2010

COMMENT NO.	PRIMARY TOPIC	COMMENT	RESPONSE
1	Floodplains	Project impacts numerous regulated Special Flood Hazard Areas. Coordination with NCDOT Hydraulics Unit should be made to ensure compliance with E.O. 11988 and the FEMA NFIP Regulations (44 CFR and NC E.O. 123) are met through the MOA between NCDOT and NCEM OGTM.	As of June 27, 2009, the NCTA is a division of NCDOT and will coordinate closely with the NCDOT Hydraulics Unit.

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APPENDIX A-3

CITIZENS INFORMATIONAL WORKSHOP SUMMARY AND COMMENT FORMS

- Citizens Informational Workshop Summary Page A3-1
- Presentation Page A3-4
- Comment Forms Page A3-27

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Monroe Bypass
Community Meetings
June 18 & 19, 2012

Summary
Both meetings consisted of a formal presentation at 6pm, repeated at 7pm if needed, describing the project's legal proceedings, right of way status, and next steps. The presentation lasted about 40 minutes and was followed by a question and answer session. Project team members also answered questions one-on-one with citizens before and after the presentation. A summary of the meetings is provided below:

June 18, 2012
Next Level Church – 4317 Stevens Mill Road, Matthews, NC 28104
102 attendees
1 comment form – support for project

Q1: (Mark Trickey) Explain the dates related to ceasing the right of way acquisition process.
A1: Many meetings were held between NCDOT and FHWA immediately following the court decision. FHWA, which is the lead federal agency, legal and management team, made the final decision that May 3 would be the cutoff date for right of way purchases. If an offer was made as of May 3, the acquisition would continue. All other properties, including those with offers between May 3 and May 21 (date that NCDOT formally announced process was halting), will be considered for acquisition based on hardship conditions on a case-by-case basis.

Q2: (Hank Harris) Property was within days of receiving an offer, so with the delay how much of the process will have to be repeated and will the current negotiated price be affected?
A2: Depending on the length of the delay, the negotiated purchase price should not be affected. Once the project is back online, the NCDOT will begin with the appraisal they started with. If too much time has elapsed, then they will determine if the appraisal is still valid. Replacement housing calculations will have to be redone.

Q3: (Bruce Mark) NCDOT needs to hear the cries of the people who are being impacted by this delay.
A3: NCDOT did not want to stop work on the project and is working to get the project back on track by the first quarter of 2013.

Q: Rumor that properties in foreclosure had been targeted for early acquisition.
A: No preference has been given to properties in foreclosure. Of the 15 offers made to date, 1 was foreclosed and owned by the bank.

Q4: Complaints about maintenance on properties already purchased (vandals, grass, etc.).
A4: NCDOT will be maintaining these properties. If there are any problems, please contact Jane Nelson.

Q5: (Gretchen Carson) What if the petition for re-hearing is denied?
A5: NCDOT is working on parallel paths – a legal path (the petition for rehearing) and a documentation path, in which additional analysis and documentation is being prepared to address concerns raised in the court decision. Either path is expected to be complete by first quarter 2013.

Q6: Request for judges' or the attorney's phone numbers.
A6: David Farren, SELC attorney, in attendance. Mr. Farren commented that the project study is flawed and needs to be redone completely, including consideration of upgrading existing US 74. He also said that the legal path pursued by NCDOT has less than a 1 percent chance of being successful.

June 19, 2012
Union County Agricultural Center – 3230 Presson Road, Monroe, NC 28112
105 attendees
4 comment forms – 3 support for project/complain about delay; 1 suggestion to widen NC 218

Q1: (Karen Thomas) She received a letter in the mail 1-2 weeks ago indicating that work had ceased, but said there were new stakes placed on her property/pasture since then. Then she said she saw surveyors from Mulkey Engineers doing work on her property this week. Why are there people on my property when work has ceased? People already surveyed the property in December.

A1: Surveyors are surveying and documenting right of way purchased in 2002-2003 as part of the original Bypass project. Jane said to please call the R/W office if there are any questions or concerns about anything.

Q2: Savings is tied up and cannot get a 2nd mortgage. Husband died and she tried to refinance. Her son and social security are her only financial lifelines. She cannot drive to the R/W office because she doesn't have the money for gas. Where are the hardship papers and help for her? She has been on an "emotional rollercoaster because of the environmental attorneys".
A2: Property owner would likely be a candidate for a hardship claim and should speak with Jane Nelson directly. Staff also advised those in need of transportation (in order to get to the R/W office) to call for arrangements.

Q3: (Reid Phifer) What is the percent chance that a rehearing will occur?
A3: It is not possible to put a % of success on this, as it is really in the hands of the court. We requested two possible scenarios from the court: 1) Ask the same 3 judges to rehear the case or 2) request an "enbanc" hearing, which would include all 15 judges. It is an uphill battle for both, but that is the legal path the NCDOT is seeking.

Q4: (Steve from Matthews) Does a January 2013 re-start of the project assume a legal victory associated with the rehearing request?

A4: The NCDOT is following two parallel paths: 1) Legal option described previously. If the NCDOT prevails, then the project goes will resume moving forward. 2) Environmental path is also underway and will reassess issues raised about the study. Either path should be complete by the first quarter of 2013.

Q5: (Heather from Monroe) Does the full panel of judges (15) have to unanimously vote in favor for the NCDOT to prevail?
A5: No. Only the majority (8).

Q6: (Karen Thomas) Who is MUMPO? Who are these people? What is the data you're talking about? When was the study done with this data and does it still make sense to rely on the data with the economy the way it is? Continued criticism about wasting taxpayer dollars and how Union County needs teachers, etc. instead. Union County is not going to keep growing now. (She continued to badger staff without allowing them to answer questions…)
A6: MUMPO is made of municipal staff, some of which are elected officials. More information is located on MUMPO's website. More discussion on the concerns can take place one-on-one following the Q&A in order to address other questions from the audience.

Q7: Concern echoed previous question about whether the projected socioeconomic growth is still valid given current economic conditions. Also, suggested no analysis on the Stewarts Creek Watershed was undertaken. Stated overall environmental issues with the project.

Q8: (Rick Traywick) What did you guys miss? Why are we going through this with all the people out doing studies on species, etc.? What stuff was missed?
A8: Numerous studies have been done to determine project impacts, as required. However, the major issue with SELC is that they disagree with the data obtained from MUMPO and how it was used to determine impacts.

Monroe Bypass

Summary of Legal Proceedings, Right of Way and Construction Update & Next Steps

NORTH CAROLINA Turnpike Authority

Community Workshops, June 18 - 19, 2012

1

Agenda

- Welcome and Introductions
- Legal and Environmental Review
- Right of Way Update
- Next Steps and Schedule
- Questions and Answers

2

History of the Case

- Nov. 2, 2010 lawsuit filed by Southern Environmental Law Center ("SELC").
- Nov. 23, 2010, SELC files motion for preliminary injunction to stop project from moving forward during the lawsuit.
- Dec. 30, 2010 Judge James C. Dever, III DENIED SELC's request for a preliminary injunction.

- Oct. 24, 2011, Judge Dever ruled in favor of NCDOT. NCDOT *did not* violate the law.
- Oct. 31, 2011, SELC files appeal to the 4th Circuit Court of Appeals in Richmond, Va.
- March 21, 2012, the 4th Circuit hears the arguments of the parties.

- May 3, 2012, the 4th Circuit renders opinion that NCDOT/FHWA failed to disclose assumptions underlying their decision to build the road and included incorrect information to a public comment.

- June 15, 2012, NCDOT filed a petition for rehearing with the 4th Circuit asking for a rehearing due to facts and law the Court overlooked and misunderstood.

What does the law require?

National Environmental Policy Act ("NEPA").

Government agencies must study the environmental impacts of a project before building the project.

The government must take a "hard look" at the human and natural environmental impacts of a project.

NEPA Studies

Government must study the:

Direct Impacts – What will the road impact in its proposed location?

Indirect Impacts – What impact will the road create in the future?

Cumulative Impacts – What impact will the road and all other planned projects have on the environment?

7

Indirect Impacts

NCDOT tries to predict how many people, households, and jobs will exist in the Project area in future years (up to the year 2030).

(These are called socio-economic projections)

NCDOT tries to predict the future socio-economic conditions with the road and without the road.

("no-build" vs. "build" scenario)

8

Predicting the Future

- There is always uncertainty.
- NCDOT follows established guidance on how to study the Indirect Impacts.
- NCDOT stands behind their study and methodology.

Mecklenburg-Union Metropolitan Planning Organization ("MUMPO")

MUMPO is the local organization that develops a long-range transportation plan.

MUMPO uses a tool to develop the plan called a Travel Demand Model.

NCDOT used MUMPO's Model & socio-economic projections in the Indirect Impacts analysis.

NCDOT researched the MUMPO projections before using them

NCDOT went to MUMPO and the localities that created the socio-economic projections and asked:

1. How were the socio-economic projections created?

2. Does the long-term land use plan represent the future with or without the Monroe Connector?

What did NCDOT Determine?

NCDOT found that the MUMPO projections best represent the project area without the project (i.e. the “no-build” scenario).

After comparing the “no-build” to the “build,” NCDOT found that the Monroe Project would induce very little additional growth in the Project area.

Why won't the project induce growth?

Existing growth in Union County.

- The fastest growing county in NC.
- 14th fastest growing county in the US.

However, there are factors that resist growth as well.

- Lack of Water/Sewer availability, moratoriums.
- 200 foot buffers on streams.

SELC Disagrees

SELC says the project was included in the "no-build" projections and therefore NCDOT compared "building the road" with "building the road."

Was the Project in the “no-build” projections?

1 out of 8 variables used to create the model that was used to measure the impacts included a 2,400 mile roadway network that had 20 miles of the Monroe Bypass.

The Project represented less than 1% (.82) of the long-range transportation plan roadway network in that 1 variable.

Judge Dever agreed with NCDOT’s conclusion that the less than 1% inclusion did not rise to the level of significance and didn’t interfere with the conclusion.

15

Less than 1% is Insignificant

In a “perfect” no-build scenario the project would have 0% inclusion.

NCDOT made the determination that the MUMPO projections best represent the “no-build” scenario despite the project being technically included in the data.

16

Public Comments

During the environmental study, NCDOT receives comments from the public and responds to those comments.

17

U.S. Fish and Wildlife Service

The USFWS is in charge of making sure the Project does not adversely affect any endangered species.

The Carolina Heelsplitter mussel is an endangered species with habitat in the project area.

18

NCDOT VERIFIED ITS ASSUMPTIONS

USFWS requested additional verification regarding the “no-build” scenario.

NCDOT went back to MUMPO and the local planning experts and asked:

Would you agree with our assumption that these forecasts represent the “no-build” scenario? If not, why?

MUMPO and the Local Experts Agreed

MUMPO and the local experts agreed that the socio-economic projections were a reasonable representation of the “no-build” scenario.

Less than 1 % is Insignificant

The District Court judge agreed with NCDOT.

- The Judge said:

NCDOT determined it was reasonable to use the MUMPO projections "with several ample investigations into the propriety of using the data."

21

4th Circuit Court of Appeal

The 4th Circuit Court of Appeals disagreed with the District Court Judge.

Court of Appeals found that the statement regarding the inclusion of the Project was incorrect and the government should have done a better job of disclosing the information to the public.

NCDOT feels that the Court of Appeals did not consider why the "inclusion" is insignificant.

22

Next Steps

NCDOT is asking the 4th Circuit Court of Appeals to rehear the case.

Hopefully, the Court will agree to rehear the case.

Next Steps

- NCDOT/Turnpike is moving forward with further environmental study and address the concerns raised by the Court.
- We requested our permits be suspended until we address these issue in Court or through our environmental review.
- We hope to address these concerns and restart the project in the early 2013.

Right of Way and Construction Update

NORTH CAROLINA Turnpike Authority

ROW & Construction Update

Agenda

- Turnpike Authority Right of Way Process
- Initiatives taken for Monroe
- Where we are today
- Hardship Acquisition Requests
- FAQs

Right of Way Process

- Receive final ROW plans
- Initial contact – Acquisition/Relocation
  - Contractor prioritization
- Order title report & appraisal
  - Appraisal inspection
  - Appraisal preparation
  - Appraisal review & approval (agency)
  - 60-90 days

Right of Way Process

- Replacement housing calculation (RHP)
  - Locate three available comparables
  - DS&S inspections
- RHP review & approval (agency)
- Initiation of Negotiations
  - Present acquisition offer
  - Present relocation eligibility – 90-day Letter

Right of Way Process

- Agreement
  - Over $500,000 – NCTA Right of Way Review Board
  - Over $1,000,000 – DOT Secretary's Right of Way Review Board
- Prepare final report package
- Final report review and approval (agency)
- Request closing funds
- Clear title encumbrances
- Closing (subject and replacement)

Right of Way Process

- Deliver 30-day Notice to Vacate
- Property vacated & inspected
- Disconnect utilities
- Asbestos inspection and abatement
- Remove site improvements
- Payment of relocation claims

Right of Way Process

WHY DO WE FILE CONDEMNATION CASES?
(Eminent Domain)

- Opinion of value
- Multiple property owners
- Title encumbrances
- Project schedule

31

Right of Way Process

- Condemnation recommendation & review
- NCTA Right of Way Review Board
- Prepare final report package
- Final report review and approval (agency)
- Request deposit check (appraised value)
- Filing map prepared

32

Right of Way Process

- Final report package submitted to Attorney General's office
- Review file documentation & prepare pleadings
- File condemnation – Clerk of Superior Court
- Court deposit (appraised value)
- Title transferred

Right of Way Process

- Deliver 30-day Notice to Vacate
- Property vacated & inspected
- Disconnect utilities
- Asbestos inspection and abatement
- Remove site improvements
- Payment of relocation claims

Right of Way Process

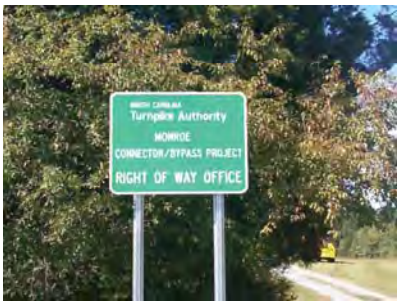
- Owner's right to withdraw deposit
- One year to file answer
- Ongoing negotiations
- Mediation
- Jury trial

Initiatives taken for Monroe

✓ Established right of way field office

✓ Identified parcels that could be acquired in their entirety
  - 84 "priority" parcels identified
  - Whole acquisition / Uneconomic remnants / Landlocked parcels
  - Voluntary acquisition
  - No condemnation until final ROW plans are available / revise appraisal

Monroe Bypass Right of Way Office



Located at 5419 Indian Trail Fairview Road,
Indian Trail, NC 28079
Office: 704-893-0131

Website www.monroeconnector-bypass.com

Monroe Initiatives

✓ WEEKLY DESIGN-BUILD TEAM MEETINGS

- Address property owner / community concerns
- Access roads
- Driveways
- Design revisions / right of way impacts

Where we are today

- Telephone contacts with all owners / displacees
- Complete parcels with offers as of May 3rd
- Offers between May 3rd and May 21st – case by case basis (hardship)

What constitutes a hardship?

- Illness
- Financial distress
- Job transfer

<u>HARDSHIP REQUEST PROCESS</u>

- Submit a letter explaining hardship
- Provide backup documentation
- Review committee
- Approval by Board of Transportation

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

How do I request hardship acquisition ?

The property owner shall submit a request for hardship acquisition in writing informing the Department of his/her hardship and the location of the property they feel encumbered by the project. The Right of Way Branch requires the property owner to submit information documenting the basis for the hardship acquisition request prior to requesting authorization.

Before any request for hardship acquisition can be approved, there are three conditions that must be met to meet Federal Highway Administration and Department of Transportation guidelines.

1) The Department must determine that a severe hardship exists for the property owner, which makes it unreasonable for the State to wait until the scheduled acquisition date to begin acquisition.

2) The Department must determine that the subject property is needed for the proposed project.

3) The Department must have available sufficient project funds to reimburse the property owner for the property acquired.

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NORTH CAROLINA Turnpike Authority

Examples of acceptable documentation to qualify for hardship acquisitions may include, where appropriate:

1) Doctor's statement: A doctor's statement clearly and fully describing why an owner or patient should relocate from the property from a medical viewpoint.

2) Financial statement: Where financial difficulties constitute the reason for acquisition, a reliable, accurate and complete discussion is appropriate.

3) Letter from employer: A letter from the employer certifying that the affected owner has been transferred to a specific location. A similar certification regarding loss of employment would likewise constitute adequate documentation.

4) Court records: Copies of documents relating to any legal actions, i.e., pending mortgage foreclosure, probate of estate, etc., which would provide support for the indicated hardship.

5) Income tax return: Verification by Department of Transportation personnel of that part of the return necessary to support the hardship situation will suffice in lieu of copies of the return.

In addition to the health, safety and/or financial hardship, the owner must also document and support an inability to sell the property for fair market value within a typical period of time. A letter from a realtor or listing service may provide this documentation. The price at which the property is offered for sale must be representative of fair market value. If the property has been offered at an unrealistic price, then the requirements of the Federal regulations have not been met.

Please submit your request for hardship acquisition and documentation to:

Jane C. Nelson
NCTA Right of Way Program Manager
1578 Mail Service Center
Raleigh, NC 27699-1578
(919) 707-2716

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Thank you for your time and attention.

Questions?

FAQs

- What is the status of the project?
- Will this project actually happen?
- How long will the project be delayed?
- Will property owners be compensated for the delay?

FAQs

- Do I still have to move within 90 days?
- Should I make repairs to my property i.e. new roof or kitchen?
- What if I find a home I want to buy?

NORTH CAROLINA Turnpike Authority

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NORTH CAROLINA
Turnpike Authority

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Monroe Bypass Status Update
Community Meeting

✓ June 18, 2012 - Next Level Church - 4317 Stevens Mill Road Matthews, NC 28104
____ June 19, 2012 - Union Co. Agricultural Center - 3230 Presson Road Monroe, NC 28112

Contact Information -Please print legibly-

Name: Zenobia Heggins (c) 704-681-1879

Mailing Address: 5914 Secrest Short Cut Road Monroe, N.C. 28110

[-Please remember to include your zip code-]

Comments

Your opinions about this project are important to us. Please use the space below to include your comments. If you need additional room to write, please take additional comment sheets or include your own letter.

I had high hopes on this project starting this summer. As I discuss with one gentlemen we need this road. ~~to~~ In order to relieve congestion on Secrest Short Cut Rd, Roosevelt Blvd, and Monroe Old.

Let's get this road build.

Please Drop this form into the COMMENT DROP BOX or mail this form by July 3, 2012 to:

Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Station
Raleigh, NC 27699-1578

NORTH CAROLINA
Turnpike Authority

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Monroe Bypass Status Update
Community Meeting

_____ June 18, 2012 - Next Level Church - 4317 Stevens Mill Road Matthews, NC 28104
_____ June 19, 2012 - Union Co. Agricultural Center - 3230 Presson Road Monroe, NC 28112

Contact Information -Please print legibly-

Name: Linda Thomas

Mailing Address: 12297 US Hwy 74 W, Peachland, NC 28133

[-Please remember to include your zip code-]

Comments

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I would like to see this bypass become a reality. It seems that more than sufficient time (20+ years in some areas) has been given to decision making. I feel that money has been wasted with studies and legal fees. Property owners are suffering in many ways with not knowing how to plan.
Please reach a decision so that we can move forward.
Thanks!

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Contact Information -Please print legibly-

Name: Jim Little

Mailing Address: 6183 NC Hwy 109 SOUTH WADESBORO NC 28170

[-Please remember to include your zip code-]

Comments

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My Suggestion in the beginning was that Hwy 218 should be Fourlaned.

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Contact Information -Please print legibly-

Name: Anthony M SPIERINGS

Mailing Address: 2716 MORGAN MILL Rd

[-Please remember to include your zip code-]

Comments

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Get it done

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Contact Information -Please print legibly-

Name: Charles & Carole Helms

Mailing Address: 1225 Old Hwy. 74, Marshville NC 28103

[-Please remember to include your zip code-]

Comments

Your opinions about this project are important to us. Please use the space below to include your comments. If you need additional room to write, please take additional comment sheets or include your own letter.

We sold our property about 12 years ago with the understanding that money was available for the project — not a toll road. Several families on 74 near Marshville had to move and some have since died. These delays make no sense at all. If the decision makers had to travel from Marshville every day they would realize how much the road is needed. When the property was sold nothing was said about a Toll road. If this was near Raleigh this would not have happened. Where is common sense in this?

(over)

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Who is making money on this delay?
Certainly not the tax payer. the older
I get the more I realize just how
incompetent government is -