SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 843-720-5270 | 43 BROAD STREET, SUITE 300 CHARLESTON, SC 29401-3051 | Facsimile 843-720-5240

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VIA E-MAIL AND U.S. MAIL

Mr. David A. Kinard, P.E.
Project Manager
South Carolina Department of Transportation
P.O. Box 191
Columbia, SC 29202-0191
kinardda@scdot.org

Mr. Robert Lee
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, SC 29201
bob.lee@fhwa.dot.gov

Mr. Kurt Taylor
Charleston County RoadWise
4401 Belle Oaks Drive, Suite 105
North Charleston, SC 29405
ktaylor@charlestoncounty.org

Re: Mark Clark Expressway – Draft EIS Comments

Dear Messrs. Kinard, Lee, and Taylor:

On behalf of the Coastal Conservation League ("League"), the Southern Environmental Law Center ("SELC") submits these comments on the draft environmental impact statement ("DEIS") for the proposed expansion of the Mark Clark Expressway. As explained below, we believe that the DEIS is fundamentally flawed. Because the current document does not meet the requirements or serve the goals of the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4332 (2010), we respectfully ask that your agencies complete a new DEIS in compliance with NEPA.[1]

[1] This letter incorporates by reference our previous comment letters on this project, which can be found in Appendix I of the DEIS; the attached *Report on the Mark Clark Expressway Extension Draft Environmental Impact Statement* prepared by Hall Planning & Engineering, Inc. ("HPE Report") (attached hereto as Ex. A); and our comments submitted to the Charleston District of the U.S. Army Corps of Engineers concerning Joint Public Notice # SAC 2010-00642-DIJ issued in connection with this project (attached hereto as Ex. B).

Background

The origins of this proposed project date back to the 1960s. In the mid-1960s, a transportation study was undertaken for the Charleston region by a number of local and federal agencies. FEIS, No. FHWA-SC-EIS-79-01-F at p. 8 (1981). The study culminated in 1968 with the development of a "Recommended Transportation Plan," which included what would later come to be known as the Mark Clark Expressway. *Id.* An environmental impact statement ("EIS") was finalized in 1972 for the portion of the project beginning at Virginia Avenue in North Charleston and extending westerly across I-26 and the Ashley River. *Id.* In 1981, an EIS was completed for the segment of the highway from Virginia Avenue in North Charleston easterly across the Cooper and Wando Rivers to a terminus with U.S. 17 in Mount Pleasant. *Id.* In 1995, a draft supplemental environmental impact statement ("SEIS") was submitted for the same portion of proposed highway that is at issue now. The draft SEIS recommended the same alignment that had been chosen in the 1972 final environmental impact statement ("FEIS") with a few adjustments due to the presence of the James Island County Park, which opened in 1990. This alignment did not move forward at the time due to a lack of funding. Draft Agency Coordination and Public Involvement Plan at p. 2 (Apr. 8, 2008). After Charleston County voted in 2007 to once again pursue this project, the joint lead agencies – SCDOT, the Federal Highway Administration ("FHWA"), and Charleston County – determined that a new EIS was necessary to address the environmental impacts of the proposed project given the changes within the project area that had taken place since the project was last studied in 1995.

Due to the acknowledged congestion of area roads and the high cost and significant environmental impacts associated with the expansion of I-526, the League retained a leading, nationally recognized transportation consulting and design firm, Glatting Jackson Kercher Anglin ("Glatting Jackson"), to devise a different alternative than the extension of I-526 with the goal of meeting the same project purpose of increasing the capacity of the regional transportation system, improving safety, and enhancing mobility to and from the West Ashley, Johns Island, and James Island areas of Charleston. To meet this directive, the firm, Glatting Jackson Kercher Anglin ("Glatting Jackson"), first spent six days interviewing more than 400 interested stakeholders. Then, it applied the information it gathered and its considerable expertise to develop a viable alternative to the expansion of the Mark Clark Expressway. This alternative (the "New Way to Work" or "NWTW") is a "functional alternative," meaning it is an option other than constructing another highway or parkway corridor within which to expand I-526. As opposed to constructing 7.9 new miles of interstate highway to connect Savannah Highway and the James Island Expressway, the League proposes a far less expensive and more effective means of addressing traffic problems. Pursuant to this alternative, the existing local road network would be redeveloped at key locations to provide increased connectivity of local surface streets, giving drivers more choices for purposes of avoiding congestion on major thoroughfares. By giving drivers additional options for moving through the area, local traffic can be reduced on overburdened arterial roads and highways, which will enhance the mobility of vehicles needing to travel through these corridors.

In order to ensure a fair evaluation of the NWTW, the League, its consultants, and its attorneys met with the joint lead agencies and their consultants on numerous occasions, supplied them with specific design information for the NWTW, and even offered to pay for Hall Planning

& Engineering, Inc. ("HPE") staff, a consulting firm that has expertise in the type of modeling necessary to evaluate a network solution, such as the NWTW, to meet with the project team and its consultants for purposes of further developing and refining the appropriate methodology and level of modeling for this project. Despite these efforts, the joint lead agencies declined to apply appropriate modeling techniques and eliminated the NWTW (identified as Alternative 19 and 19R in the DEIS) at the earliest possible stage of the analysis. As explained below, the DEIS relied on a contrived tiered process, inappropriate modeling techniques, and unreasonable assumptions to eliminate reasonable alternatives like NWTW from consideration and obscure the meager transportation benefits provided by the recommended preferred alternative. We respectfully request that the agencies cure the following defects in the DEIS before proceeding further.

Legal Issues

I. The DEIS Excludes Reasonable Alternatives From Consideration

Although NEPA dictates procedures, not outcomes, it is nevertheless an "action-forcing" statute that aims to improve the quality of agency decisions and protect the environment. See *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989). The NEPA process is designed to "bring pressure to bear on agencies" and is "almost certain to affect the agency's substantive decision." *Id.* at 349 (internal quotation marks omitted).

NEPA's EIS requirement has a dual purpose in achieving these goals. First, it ensures that agencies "will have available, and will carefully consider, detailed information concerning significant environmental impacts," *id.*, and thereby "fosters informed decision-making." *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1056 (9th Cir. 1982). Second, it "serves as an "environmental full disclosure law so that the public can weigh a project's benefits against its environmental costs." *Nat'l Audubon Soc'y v. Hoffman*, 132 F.3d 7, 12 (2d Cir. 1997).

The "[e]valuation of alternatives to the proposed project is the 'heart of the environmental impact statement.'" *City of South Pasadena v. Slater*, 56 F. Supp. 2d 1106, 1121 (C.D. Cal. 1999) (quoting 40 C.F.R. § 1502.14). The EIS must "[r]igorously explore and objectively evaluate all reasonable alternatives," including "alternatives not within the jurisdiction of the lead agency" and "the alternative of no action." 40 C.F.R. § 1502.14(a), (c), (d). As a general rule, an agency's "duty under NEPA is to study all alternatives that appear reasonable and appropriate for study at the time of drafting the EIS, as well as significant alternatives suggested by other agencies or the public during the comment period." *Roosevelt Campobello Int'l Park Comm'n. v. U.S. Envtl. Protection Agency*, 684 F.2d 1041, 1047 (1st Cir. 1982) (internal quotation marks omitted). FHWA's Guidance on NEPA Implementation also specifically calls for inclusion of certain alternatives in the "range of reasonable alternatives" evaluated: transportation system management ("TSM"), mass transit, and build alternatives encompassing "[b]oth improvements of existing highway(s) and alternatives on new location." FHWA, Guidance for Preparing and Processing Environmental and Section 4(f) Evaluations (FHWA Technical Advisory 6640.8A). This guidance, as well as the case-law, clarifies that the EIS must evaluate functional alternatives to freeway construction such as different systems of transportation. *See, e.g.*, Rankin v. Coleman, 394 F. Supp. 647, 659 (E.D.N.C. 1975).

NEPA requires that the EIS "present the environmental impacts of the proposal and the alternatives in comparative form," thereby "sharply defining the issues and providing a clear basis for choice among options by the decisonmaker and the public." 40 C.F.R. § 1502.14. "The existence of a viable but unexamined alternative renders an environmental impact statement inadequate," *Resources Ltd. v. Robinson*, 35 F.3d 1300, 1307 (9th Cir. 1993) (internal quotation marks omitted).

A. The DEIS Used An Arbitrary and Inconsistently-Applied Methodology to Avoid Considering Alternatives to New Highway Construction

NEPA requires that an EIS serve "as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made." 40 C.F.R. § 1502.2. Here, the agencies' analysis has been skewed heavily in favor of the agencies' proposal and against non-highway and non-parkway solutions. Not only was the modeling process seriously flawed, the agencies used a contrived tiered system to avoid considering alternatives like NWTW with far fewer environmental impacts than their proposal. Then, they shifted methodology in a way that bolstered the preferred parkway alternative. This biased process indicates the agencies attempted to justify their project through the DEIS rather than neutrally evaluate its impacts as NEPA requires.

The agencies narrowed the range of alternatives considered in the DEIS through a two step process. First, they developed a "preliminary alternatives analysis" that distributed the factors being considered among three stages, or "tiers," of analysis, and required each alternative to progress through "natural breaks" in the data at each tier to be considered worthy of further evaluation. Second, they applied this phased analysis to some alternatives but not others. Manipulation of this tiered process systematically disadvantaged "functional" alternatives like NWTW and allowed the agencies to ignore the dramatic differences between the environmental impacts of NWTW and the preferred alternative based on statistically insignificant differences in the traffic benefits projected by flawed and unreliable models. 40 C.F.R. § 1502.14.

The DEIS makes clear that NWTW was held to different standards than the highway and parkway alternatives. Although NWTW was eliminated in the first round of the preliminary alternatives analysis based on flawed modeling, the agencies also assessed how it would have performed in the third tier of the preliminary alternatives analysis. They decided that NWTW would have been appropriately eliminated at that time because it did not surpass the "natural breaks" in GIS and modeling data used to measure its impacts on wetlands, relocations and travel time. The agencies determined that had NWTW progressed to this tier, it would have "met three of the four criteria to be eliminated" and "would have been eliminated in Round 3" because: its 31 relocations exceeded the natural break of 18; its improvement to Johns Island regional mobility fell below the natural break of 3.6 minutes; and its improvement to James Island regional mobility fell below the natural break of 24 seconds. The agencies also noted their estimate of NWTW's wetlands impacts, 10.1 acres, exceeded the natural break of 7.1 acres for wetlands impacts. None of the "reasonable alternatives" eventually included in the DEIS could have met the relocation and wetlands standards used to justify eliminating NWTW from consideration. All of the reasonable alternatives impact well over 7.1 acres of wetlands and

require far more than 18 relocations. But, at the time the agencies weighed these factors and developed the "natural breaks" used to measure NWTW, the highway alternatives were still "conceptual corridors," whose design and reach had not been fully fleshed out. Because these alternatives were only partially developed, their wetlands and relocation impacts were only partially measured when these criteria were weighed. NWTW, in contrast, involved a detailed, fully designed proposal whose impacts could be fully measured. This resulted in an inaccurate and misleading comparison.

The agencies did not disclose or consider that NWTW was not realistically compared to the highway alternatives during the preliminary alternatives analysis, but their differing treatment of the preferred alternative reveals the problem. The DEIS states that unlike for NWTW and other alternatives, for purposes of evaluating Alternative G, "[p]otential relocations and wetland impacts were not quantified in GIS." DEIS App'x K. It goes on to explain that "because at its inception, the design of Alternative G had been developed beyond the conceptual corridors that were evaluated" alongside NWTW, "Alternative G could not be evaluated comparatively to" those alternatives. *Id.* Because Alternative G involved "additional development and detail" such as "refined right of way [and] designed intersections and interchanges," the agencies understood that a comparison of Alternative G to the still-conceptual highway alternatives "would be an 'apples to oranges' comparison" based on the GIS data. *Id.* Alternative G was therefore carried through for full consideration without undergoing the arbitrary phased analysis to which NWTW was subjected.

Had NWTW been carried forward for analysis in the DEIS, it would have substantially outperformed all of the agencies' "reasonable alternatives" in wetlands impacts. Our attached letter concerning the Section 404 permit application addresses wetlands issues in more detail. Accordingly, here we will simply note that even based on the agencies' estimates, all of the "reasonable alternatives" included in the DEIS impacted far more wetlands than NWTW. *See* DEIS at 5-253. And, had Alternative G, which the agencies estimated directly impacts 17.43 acres of wetlands and indirectly impacts far more, not been excluded from the preliminary analysis, it would have fallen far short of the 7.1-acre bar used in screening NWTW. NWTW would also have proven superior in terms of relocations, as the agencies estimated it would require fewer relocations than every "reasonable alternative" except A and G, both of which clip their relocation numbers by cutting through the James Island County Park in violation of Section 4(f), as detailed more fully below. Additionally, again, Alternative G, which the agencies estimated requires 26 relocations, could not have met the 18-relocation threshold applied to NWTW. Notably, the agencies considered alternatives with as many as 70 relocations to be reasonable. And, all of the "reasonable alternatives" would have fallen short of the wetland and relocation criteria used to screen NWTW.

Moreover, in addition to obscuring the impacts of the highway alternatives relative to NWTW, the "natural breaks" methodology and inaccurate modeling also inflated the benefits of the highway and parkway alternatives as compared to other options. Aside from wetlands impacts and relocations, the only other criterion in the "Tier 3" analysis cited as a justification for eliminating NWTW was travel time between West Ashley, James Island, and Johns Island, described as "regional mobility" or "system connectivity." Because the improvements to travel time brought about by the highway improvements were so miniscule, this methodology resulted

in alternatives being advanced or eliminated based on differences so small they had to be measured in fractions of a minute. The agencies justified eliminating NWTW because, based on their flawed model, it fell below the "natural break" of 24 seconds for improvement to "James Island regional mobility." DEIS App'x K. Yet, Alternative G improved the same measure by only 36 seconds, and the range of reasonable alternatives analyzed in the DEIS only improved this measure by a range of 30 to 66 seconds. DEIS App'x K at 2-115. It is wholly arbitrary to determine that alternatives that improve a commute by 30 seconds or so serve regional mobility sufficiently to be included in an EIS, but those that increase it by 23 seconds or less do not. There is no meaningful difference in impacts to regional mobility among alternatives that shave fractions of a minute from a 21.7 minute commute. Moreover, drivers cannot confidently predict their travel time for a twenty minute trip down to the second at the moment they embark, and yet the agencies eliminated NWTW based on their presumed ability to do so for trips occurring more than 20 years in the future.

Other functional alternatives – the TSM and mass transit alternatives – were carried through to the DEIS stage without undergoing the preliminary alternatives analysis, but to their disadvantage. Because these alternatives skipped the "preliminary" stage at which empirical modeling was conducted, their benefits were never quantified. The agencies attempted to justify this different treatment by describing the TSM and mass transit alternatives as too "conceptual" for evaluation at the time. But, the agencies had control over the timing and the order in which the study team completed its tasks. They could easily have developed these alternatives to whatever degree was necessary to include them in the screening process, but arbitrarily chose not to do so. Failure to include these alternatives in the preliminary alternatives analysis biased their comparison and further demonstrates that the agencies gave priority to developing highway alternatives.

B. The DEIS Does Not Fully and Fairly Consider Functional Alternatives

1. The Agencies Modeled NWTW Using an Unreasonable Methodology They Knew Would Not Generate Reliable Results

In preparing the DEIS, the agencies used predictive models to forecast the benefits to congestion and mobility anticipated from each alternative (except for the TSM and Mass Transit alternatives, which were not modeled). Such models can assist in the NEPA process, provided that the model selected is "a reasonable analytical tool that takes account of the pertinent data," *Atlantic Terminal Urban Renewal Area Coalition v. N.Y. City Dep't of Envtl. Protection*, 740 F. Supp. 989, 994 (S.D.N.Y. 1990), and the agencies ensure that "reasonable use is made of the model." *Utah Shared Access Alliance v. U.S. Forest Serv.*, 288 F.3d 1205, 1211 (10th Cir. 2002). Accordingly, we submitted extensive comments on the modeling of NWTW and also offered to pay for a consulting firm to assist the agencies in modeling this alternative. The agencies, however, simply refused to make reasonable use of the available traffic simulation models in analyzing NWTW. Specifically, they refused to use a traffic model capable of reliably forecasting NWTW's ability to relieve congestion and increase mobility in the study area.

As explained fully in the attached HPE Report, "the agencies failed to use an industry standard modeling tool, such as SYNCHRO™, to capture any meaningful benefits of the

[NWTW]." HPE Report at 3. Instead, they applied a model that "simply does not allow for the fine grained analysis necessary to accurately represent the NWTW's network of streets" or to "accurately detect[]" other "fine details," such as driveway closures, and was "inadequate for determining NWTW performance." HPE Report at 3, 5. Additionally, the "travel demand models are not developed or calibrated to reflect the higher degrees of walkability, bikeability and transit friendliness inherent in the compact, urban development patterns assured by NWTW." HPE Report at 6. Because the "travel demand" type of model the agencies applied operates at too course a scale to assess NWTW realistically, "it was unreasonable for the agencies not to use SYNCHRO™ (or a similar tool that can measure the benefits of fine grained network solutions)" to analyze NWTW. HPE Report at 6. NEPA requires that agencies "ensure the professional integrity, including scientific integrity, of the discussions and analyses in the [EIS]," 40 C.F.R. § 1502.24. The failure to apply the standard tools of the trade to assess the benefits of a street network such as NWTW vitiates the integrity of the agencies' analysis and the comparison of the NWTW with other alternatives. As explained in the HPE Report, "the assessment of the NWTW would have been radically different," had the agencies used the correct tools, and "would have shown that the NWTW is equal to or superior to the other alternatives considered . . . in achieving the stated purpose of the project." HPE Report at 4.

Moreover, the description of the "tools available for traffic analysis" in the DEIS is consistent with our comments and the conclusions in the HPE report, indicating the agencies must have understood that the model they applied to NWTW could not adequately assess its benefits. Appendix K states that, "Synchro is the industry standard software used for modeling traffic operations at macroscopic levels." DEIS App'x K at 2-49. And, the Model Modification Report included in Appendix L describes macroscopic models as appropriate for "surface-street grid networks." *Id.* at 2. It further states that travel demand models, such as the model applied to NWTW, were originally developed to assess "major highway improvements in metropolitan areas" and "only have limited capabilities" in assessing "implementation of ITS/operational strategies." DEIS App'x L at 1. Nevertheless, they failed to apply the correct tool, Synchro or a similar industry-standard program, to NWTW and instead opted for an inadequate model with "limited capabilities."

The arbitrary insistence on applying the same model to fundamentally different alternatives skewed the analysis in favor of highway alternatives, whose benefits could be captured by the model used, and against functional alternatives such as NWTW, whose benefits could not. The DEIS's explanation of the modeling methodology reflects this bias. The DEIS's Model Modification Report (Appendix L) states that the agencies chose their travel demand model as the most appropriate to tool to estimate traffic impacts and screen alternatives from further consideration because "[t]ravel demand models are developed to '*determine the benefits and impacts of major highway improvements in metropolitan areas*," which is the subject to the I-526/Mark Clark Expressway study." DEIS App'x L at 3 (emphasis in original). Thus, the agencies, in their own words, decided that the "subject" of their "study" was "*the benefits and impacts of major highway improvements*." *Id.* The benefits and impacts of a network alternative to a major highway improvement necessarily fall outside the scope of that study, and were

therefore not accounted for in the choice of (or the results generated by) the model used to conduct it.[2]

Further skewing the analysis, the agencies used different techniques to model the preferred alternative they ultimately developed. In assessing alternative G, they used Synchro, the same tool they refused to apply to NWTW, to capture the benefits of that alternative's finer details. The results of this finer analysis impacted their consideration of the parkway alternatives, which the agencies found reduced vehicle miles traveled (VMT) substantially more than other alternatives due to the addition of the new connecting streets and intersections that they modeled with Synchro. *See* DEIS App'x K at 2-112

To comply with NEPA, the agencies must use an industry-standard tool such as Synchro to reliably model NWTW. NEPA requires them to "rigorously explore" the available alternatives, 40 C.F.R. § 1502.14, and arbitrary application of an inappropriate model is not a rigorous exploration. Moreover, "to allow a reasonable reviewer a fair opportunity to choose between the alternatives," each alternative must be "presented as thoroughly" and "given the same weight" as the agencies' proposal. *Rankin v. Coleman*, 394 F. Supp. 647, 659 (E.D.N.C. 1975).

Additionally, the agencies have an obligation to consider and frankly disclose the limits of their model and the unreliability of their results. NEPA requires that they "test the model results against their best technical judgment of what can logically be expected to actually occur on the ground." *Utah Shared Access Alliance v. U.S. Forest Serv.*, 288 F.3d 1205, 1211 (10th Cir. 2002). Because the agencies were aware that the NWTW modeling results were unreliable, they could not reasonably afford those results dispositive weight in eliminating the NWTW alternative. And, they were required to disclose this limitation to the public, rather than present the NWTW results as on par with those generated for the more appropriately modeled highway and parkway alternatives. "NEPA . . . requires up-front disclosures of relevant shortcomings in the data or models." *Lands Council v. U.S. Forest Serv.*, 395 F.3d 1019, 1032 (9th Cir. 2004). Instead of complying with this mandate, the agencies painted a fundamentally misleading portrait of NWTW's benefits that precluded a rational or fair comparison. This failure to disclose that the modeling of NWTW "was incomplete and ignored key variables" violates NEPA. *Id.* at 1031. Under the statute, "[t]he bottom line . . . is that if the agency knows something is wrong with its model or data, it must disclose that fact." *Alliance for the Wild Rockies v. U.S. Fish & Wildlife Serv.*, 2006 US Dist LEXIS 98233, *34 (D. Mont. Aug. 29, 2006).

In summary, the agencies evaluated NWTW by using a modeling tool they knew, or at least should have known, would not work and then treated the results of the model as gospel truth. This analysis of NWTW is effectively no analysis at all. And, adding insult to injury, the

[2] The Model Modification Report goes on to explain that once the "reasonable alternatives were identified" through the Tier I assessment of the relative benefits of major highway improvements, the agencies applied "more micro-level analytical tools" to "consider impacts at the corridor and intersection levels." DEIS App'x K at 3. To conduct this more refined inquiry, the agencies used Synchro, the same tool they refused to apply to NWTW.

agencies further skewed the comparison of alternatives by applying the same tools they refused to use in analyzing NWTW to their preferred alternative to capture every detail of its potential. Because NWTW is a significant alternative to the proposed project, the agencies must consider and disclose its benefits in an EIS before pressing ahead with their project. Accordingly, the EIS must be redone.

2. The Agencies Used Unreasonable Assumptions and Inaccurate Data That Ensured Inaccurate Modeling Results

"An agency may not rely on incorrect assumptions or data in an EIS." *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 964 (9th Cir. 2005). And, if an agency inputs incorrect data or unreasonable assumptions into the model, even the best modeling tools will provide inaccurate and unreliable forecasts.

i. The Single Land Use Assumption Is Unreasonable

The DEIS applied a single land-use scenario, *i.e.*, the same set of land-use assumptions, for all of the alternatives considered. DEIS App'x L at 15. It briefly states that this uniform assumption was applied so as "[t]o properly compare transportation alternatives within the Mark Clark Expressway EIS." *Id.* In fact, however, it is well established that this approach is invalid. Both standard practice and judicial guidance caution against it. Here, the implausible single-land use assumption further biased the comparison of alternatives to freeway or parkway construction.

In transportation planning circles, the premise that there is no relationship between construction of a major thoroughfare such as the proposed Mark Clark extension and adjacent land development is "universally accepted as false." HPE Report at 5. "Highways create demand for travel and expansion by their very existence." *Sierra Club v. U.S. Dept of Transp.*, 962 F. Supp. 1037, 1043 (N.D. Ill. 1997). Indeed, the U.S. Department of Transportation recognized as far back as 1971 the ability of highway construction through previously undeveloped areas to act as a catalyst for industrial, commercial, or residential development. *City of Davis v. Coleman*, 521 F.2d 661, 674-75 (9th Cir. 1975) (quoting DOT's PPM 90-1, Aug. 24, 1971, 2 ELR 46106 at 46110). And, as the Community Impact study prepared for this proposed project explains, "[h]ighway planning research consistently demonstrates that improved interstate access redistributes growth around the transportation network." EDAW/AECOM, Mark Clark Community Impact Assessment, at 2 (2007). In particular, it is "well-documented" that alongside highway construction, "[m]ore intense land use activities emerge around areas of improved access at the expense of communities without enhanced interstate links." *Id.* For many projects, the effects of this induced growth may be even more significant than those of the project itself, and the EIS must account for these changes. *City of Davis*, 521 F.2d 661, 674-75. Failure to analyze the impacts of induced growth may skew the alternatives analysis and preclude a reasoned choice. *N.C. Alliance for Transp. Reform v. U.S. Dep't of Transp.*, 151 F. Supp. 2d 661 (M.D.N.C. 2001).

The agencies' failure to acknowledge and analyze the traffic and population growth their proposal would induce resulted in an incorrect and misleading alternatives analysis. In service of their single land use assumption, the DEIS narrates that "the area will continue to grow with or

without the construction of the Mark Clark Expressway project." DEIS at 5-20. That is true, but misleading. A study prepared specifically for this project and relied on in generating the land-use assumption applied in the DEIS found that there will be as much as 40 percent more growth in the study area if the proposed project is constructed. Community Impact Assessment. The study, which was omitted from the DEIS, concluded that "the Mark Clark extension is likely to divert growth that would otherwise emerge in the eastern and central sections of the region to the more westerly areas," and "could significantly alter" the existing land-use forecasts. *Id.* at 7. It incorporates empirical modeling that "suggest[s] that Johns Island will see 20 to 40 percent more population growth than predicted by the current BCD forecast, and that James Island will see 0 to 10 percent more population growth than predicted by regional forecasts." *Id.* at 15. It is misleading for the DEIS to state only that growth will occur regardless without acknowledging there will likely be as much as 40 percent more of it if the proposed project is constructed.

Because the agencies relied on an unreasonable assumption instead of the land-use and population forecasts developed through the Community Impact Analysis, their modeling results are fundamentally flawed and misleading. The "travel demand" model the agencies used makes predictions based on "land-use distribution." HPE Report at 4. Because the agencies' used the same land-use distribution for all alternatives, their modeling did not account for effects of the induced growth brought about by the highway alternatives. This inflated the projected benefits of the highway alternatives relative to alternatives such as NWTW and the no build alternative. Where, as here, "dramatic differences appear in the distribution of future growth, then additional land use distributions are common practice." HPE Report at 4. The modeling results for NWTW and the no build alternatives underrepresented the benefits of those alternatives because they did not account for the absence of highway induced growth.

Moreover, the modeling further understated the benefits of NWTW because it did not account for the very different type of land-use changes expected to result from NWTW. Like the highway alternatives, NWTW would result in land-use changes, but unlike the highway alternatives, NWTW could catalyze a land-use distribution that lightens the load on existing transportation infrastructure. NWTW would better distribute traffic and facilitate alternative modes of transportation such as walking, biking, and transportation. Accordingly, "an additional 2035 projection of land-use would be necessary to accurately simulate the travel benefits from NWTW." HPE Report at 5.

The agencies' unreasonable single land-use assumption not only skewed the analysis of traffic benefits, it biased the evaluation of the impacts of the different types of alternatives addressed. The sprawl induced by the highway alternatives and the compact development pattern facilitated by NWTW affect the analysis of impacts to air quality and other factors as well. *Conservation Law Found. v. Fed. Hwy. Admin.*, 630 F. Supp. 2d 183, 214 (D.N.H. 2007). Failing to apply land-use forecasts appropriate to each type of alternative is a fundamental flaw in the DEIS analysis that the agencies must correct before a realistic evaluation and comparison of alternatives can take place.

ii. The Agencies Only Modeled Part of NWTW

We trust the agencies understand the importance of accurately inputting NWTW's network into the model. As the DEIS explains, "[t]he significance of the highway network is fundamental to the validity of the model as a planning tool." DEIS App'x L at 16. "If a roadway network is not coded accurately, its performance will be modeled incorrectly, providing inaccurate and unreliable results for planning improvements and alternatives for the transportation network." *Id.*

- Failure to Include NWTW's Access Management Strategies

One of NWTW's key strategies for improving congestion, safety, and mobility is to implement access management techniques on problem roadways. Access-management strategies such as consolidating driveways and constructing medians to reduce the turning movements that slow traffic and increase the potential for accidents on higher-speed roads. SCDOT recognizes the benefits of these techniques and has incorporated them into its Access and Roadside Management Standards ("ARMS"). But, during the scoping process, the agencies suggested SCDOT lacked authority to implement these techniques. We addressed SCDOT's concerns in comments and correspondence with the agency and are pleased to see that the DEIS states the agencies did include median construction in the modeling inputs for NWTW. Unfortunately, it appears that the consolidation of commercial driveways provided for in NWTW was not considered, and the DEIS does not provide an explanation.

When we discussed this matter with SCDOT in February 2009, SCDOT appeared to believe that it lacked legal authority to implement this aspect of NWTW. We explained that there is no legal impediment to carrying out the proposed driveway consolidations and offered to discuss the matter further with the agencies' attorneys. We also requested that the agencies explain to us any perceived barriers to this approach. No explanation was offered, limiting our ability to comment on this matter. But, in the event SCDOT remains concerned about potential legal impediments, we wish to reiterate that SCDOT has the power of eminent domain to carry out this aspect of our proposal. Under S.C. Code Ann. § 57-5-320, SCDOT "may acquire an easement or fee simple title to real property by gift, purchase, condemnation or otherwise as may be necessary, in the judgment of the department, for the construction, maintenance, improvement or safe operation of highways in this State." Moreover, driveways and other encroachments have been subject to permitting requirements in South Carolina since 1956, and "SCDOT reserves the right to reconsider existing access when there is a change in land use that will affect the amount, type, or intensity of traffic activity to a site, . . . even when no significant building renovations are planned." National Cooperative Highway Research Program ("NCHRP") Synthesis 304: Driveway Regulation Practices, A synthesis of Highway Practice, at 30 (TRB 2002).

- Failure to Consider New Connecting Roads

During the NEPA process, we made clear to the agencies that although we believe the publically funded components alone make NWTW a viable strategy, the agencies must consider the privately-funded redevelopment reasonably anticipated to go hand in glove with NWTW's investment in public infrastructure when evaluating this alternative. The DEIS states that the

agencies failed to do so. Specifically, it indicates that: "Because SCDOT cannot oversee or ensure the construction of the conceptual privately-funded roads as a result of redevelopment, the privately-funded roads were not included as part of the alternative to be evaluated. As a result, no new roads were included in the analysis of Alternative 19R [(the revised NWTW proposal)]." DEIS App'x K.

The refusal to consider the privately-funded portion of NWTW is unreasonable and ensures an underestimation of NWTW's true benefits. To the agencies' credit, the DEIS does not quarrel with our conclusion that the private redevelopment is "reasonably foreseeable." DEIS App'x K. It would defy common sense to presume that private redevelopment will not occur alongside public infrastructure investments designed to promote that type of development. The agencies cannot simply ignore this reality in modeling the NWTW. As explained in the attached report, the agencies can account for these roads in the same manner they account for the private cul de sacs and suburban development projected to be induced by the highway alternatives. HPE Report at 7-9.

iii. Arbitrary Expansion of NWTW Right of Way

The agencies used the default SCDOT design standards, rather than the standards recommended by the transportation engineers who developed NWTW, to create right of way widths for NWTW. The DEIS does not give any explanation for the agencies' insistence on those standards. It simply states that SCDOT had recommended different typical sections than those developed for NWTW at a February 10, 2009 meeting, but does not provide any basis for that recommendation. We made clear to SCDOT at the February 10, 2009 meeting that we wished to review the specific cross-sections devised for NWTW and memorialized that understanding in a February 19, 2009 follow-up letter, but we were not consulted on this matter. This is puzzling in light of the seemingly different treatment of the City of Charleston's suggested alternatives. In evaluating "the parkway concept" introduced by the City of Charleston's proposal of Alternatives 18 and 36, the agencies sought what they considered to be "[n]ecessary input from the City of Charleston . . . to assist with defining an appropriate right of way width for impact analysis" and ultimately developed right of way widths "based on input from the City of Charleston." DEIS App'x K at 1-7. The agencies unexplained unwillingness to apply the design developed by the professional transportation planners who created the NWTW alternative is arbitrary and capricious.

iv. Relocations

In reviewing the DEIS, we noted that the agencies estimated that a surprisingly high number of relocations would be required for NWTW. We are concerned that this number may be inaccurate, but the DEIS does not provide the information needed to verify the calculation. It appears the high number of relocations (and perhaps also the high estimate of wetlands impacts) may result from the change in right-of-way widths made by the agencies. Also, it is unclear whether the agencies treated all exercises of eminent domain alike or only assessed the removal of buildings as a "relocation," but less impactful exercises of SCDOT's eminent-domain power such as easements for driveway access that do not disrupt the structures on a parcel should be

treated differently than the taking of entire lots. And, the private redevelopment induced by NWTW of course cannot be considered a "relocation."

C. NWTW Is a Reasonable Alternative that Must Be Fully and Fairly Evaluated in an EIS

NWTW uses two principle strategies to decrease congestion, improve mobility, and enhance safety in the study area. First, it improves the street network by adding connecting roads that give drivers additional options for moving through the area. This removes local traffic from overburdened arterial roads and highways, enhancing the mobility of vehicles needing to travel through these corridors. Second, it uses access-management strategies such as adding medians and consolidating driveways to reduce the turning movements that slow the traffic on major roads and increase the potential for accidents. As the attached HPE Report, incorporated herein by reference, explains, NWTW can be expected to perform as well or better than the "reasonable alternatives" included in the DEIS if modeled appropriately. HPE Report at 4. Notably, the agencies never evaluated NWTW in relation to the project's purpose and need. Rather, they evaluated NWTW only in comparison to other alternatives and screened it from further consideration not because it did not provide transportation benefits, but because other alternatives offered "more" benefit to traffic and congestion relief according to biased models described above. DEIS App'x K. This occurred because NWTW was screened through a "preliminary" process that served to narrow roughly 35 similar highway conceptual corridors into a more manageable number for more thorough evaluation in the DEIS. Unlike other alternatives, it was not independently assessed in relation to the project's underlying goals. This is apparent from the agencies' Section 4(f) Evaluation, which cites only three alternatives – no build, mass transit, and TSM solutions – as failing to meet the project purpose and need. *See* DEIS at C-7.

Part of the NWTW incorporates a proposal to improve the network of streets at the congested intersection of Maybank Highway and River Road on Johns Island as an alternative to widening the highway. The proposal, known colloquially as the Maybank "pitchfork" already withstood scrutiny previously when the City and County of Charleston came together to request an independent, professional assessment of its benefits from a panel of the Urban Land Institute, one of the nation's most respected sources on urban planning, growth, and development. After the study dispelled the myths about the merits of the approach, the local government approved the proposal, and it has entered the design and engineering stage. The other part of NWTW builds on the same strategies that made the Maybank Pitchfork a success to create a comprehensive proposal for the entire study area.

NWTW's "network" concept of better connecting the existing street network to give drivers more options for local trips is a recognized and effective way to serve regional mobility. Notably, a study commissioned by Georgia transportation authorities found this approach superior to a proposal to construct an outer beltway in Atlanta similar to the Mark Clark extension. The Northern-Sub-Area Study and Georgia 400 Corridor Analysis, prepared by Parsons Brinkerhoff for the Georgia Department of Transportation and Georgia Regional Transportation authority concluded that strengthening the existing road network through increased connectivity combined with better coordinated land-use and transportation planning

would more effectively relieve congestion than the proposed beltway. The study resulted in the removal of the proposed beltway from the Atlanta area's long-range Transportation Plan. Other states have also recognized that "[i]mproving roadway connectivity can serve regional mobility," NJDOT & PennDOT, Smart Transportation Guidebook, at 29 (2008), and have incorporated this approach into their programs. In our region, *The BCD Regional Scan: Our Region, Our Plan* (2008) developed by the Berkeley, Charleston, and Dorchester Council of Governments recognizes that "[o]ne method to assist traffic flow is the creation of a much more interconnected transportation network – a unified system of collector and arterial roadways" to disperse traffic. BCD Regional Scan at 29. Locally, the City of Charleston has recognized the importance of network connectivity and "[a]s a practice . . . has been requiring that the streets in new neighborhoods connect to neighboring properties and existing streets." Johns Island Community Plan at 24. The City formalized this practice through an ordinance that "requires these connections across both residential and commercial properties." *Id.*

Moreover, the professionals who designed NWTW provided statistical evidence of its potential, which the agencies ignored. They calculated, for example, that NWTW could enable as much as 56 percent of the projected 2030 vehicle traffic to reach necessary destinations without using Savannah Highway. It is unreasonable for the agencies to treat an alternative with the potential to cut the traffic on key arterials in half as unable to address issues of congestion and mobility. Another professional consultant reviewing the design firm's work made a rough estimate that, had appropriate modeling tools been used, NWTW's impact on one of the traffic measures used to screen alternatives, VMT, would have been a 108,000 reduction, HPE Report at 6, which is more than the 98,797 reduction projected for the preferred alternative, *see* DEIS at ES-16, and substantially more than the 19,004 the agencies estimated for NWTW.

Although the agencies refused to meaningfully evaluate NWTW's network solution, they did import the concept into their own proposal and attempt to model it correctly when addressed in that context. According to the DEIS, "[a]lternatives F and G reduce miles traveled by substantially more than the other alternatives," and "[t]his difference results from the enhancement in regional connectivity" that allows "multiple options for shorter distance trips compared to the other alternatives, which provide access at fewer locations." DEIS App'x K at 2-112. This substantial difference occurred even though Alternatives F and G, in contrast to NWTW, are not carefully crafted to redistribute trips to commercial centers. Where, as here, an agency recognizes the benefits of an approach and relies on it to meet part of the project's purpose and need, NEPA requires it to take a "hard look" at whether that strategy might solve the entire problem. *Utahns for Better Transportation v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1170 (10th Cir. 2002) (concluding that agencies failed to adequately consider public transit as an alternative).

The benefits of the other key aspect of NWTW, its access-management strategies, enhance the efficacy of this alternative. "In the past few decades, substantial research has advanced the state of the practice" on access-management, which is recognized as an effective means of relieving congestion and decreasing commuting times. Kristine M. Williams, Access Management Manual: TRB Committee Documents the State of the Art (TR News 228, Sept.-Oct. 2003). SCDOT's ARMS manual, for example, indicates that adding a non-traversable median has the effect of reducing delay by 30 percent and increasing the roadway's capacity by

30 percent. One of the chief benefits of access management is "maintaining mobility" and "[a] growing number of cities, counties, and planning regions are managing property access by closing, consolidating, or improving driveways." NHCRP Report 420: Impacts of Access Management Techniques, at 13 (1999). On major thoroughfares such as Savannah Highway, where roadside businesses have been "allowed to develop haphazardly, inference from the roadside can become a major factor in reducing the capacity . . . and eroding the mobility function of the facility." AASHTO, A Policy on Geometric Design of Highway and Streets 88 (5th ed. 2004) (hereinafter "AASHTO Greenbook"). The techniques included in NWTW solve the problems created by this interference, which has been described as "a prominent cause of highway obsolescence." AASHTO Greenbook at 2. Notably, SCDOT's own standards provide that "[s]hared driveways requiring mutually executed easements are encouraged and, in some circumstances, may be required by the Department." SCDOT ARMS at 21.

Finally, NWTW is designed by professional transportation planners to promote compact, pedestrian and bike-friendly developments that bring more jobs, shopping and services closer to residents and are compatible with improved transit services. For less cost, it would more effectively spur economic development beneficial to our community and consist with the vision spelled out in our land-use and comprehensive plans. Having been handed a viable solution on a silver platter, the agencies have an obligation under NEPA to appropriately analyze it in the DEIS.

D. <u>No Action Is A Viable Alternative</u>

"One of the reasons that Congress has required agencies to set out and evaluate alternative actions is to give perspective on the environmental costs, and the social necessity, of going ahead with the original proposal." *Town of Matthews v. U.S. Dep't of Transp.*, 527 F. Supp. 1055, 1058 (W.D.N.C. 1981). Here, the needless environmental and social costs, as well as the inordinate expense, of the proposed project require serious consideration of the no build alternative. The agencies, however, have inappropriately limited their analysis to comparing the relative merits of the various highway and parkway alternatives. At no point do they appear to have considered whether building the project is justified in light of its substantial costs and meager transportation benefits. This analysis is essential.

To enable a reasoned choice on whether to proceed with their project, the agencies must correct aspects of the DEIS that are misleading. In particular, the DEIS presents a skewed portrait of the highway and parkway alternatives that suggests their benefits are much greater and more certain than they in fact are. Most notably, although the DEIS emphasizes level of service (LOS) and Level of mobility (LOM) as the measures most understandable to the public, DEIS at 2-11 to 2-12, it does not share the results of the agencies' LOS or LOM. The agencies eventually made the LOS information available on their website, and the LOS results indicate that key road segments touted by the agencies as being "improved" by the proposed project will remain in a severely congested condition after it is built. Moreover, as explained in the attached report, the differences in transportation benefits ascribed to the various alternatives considered, including those eliminated early in the process, are uncertain and well within the model's range of error. Yet, the DEIS presents the results as accurate to a degree that is "statistically impossible" given their inputs. HPE Report at 11-12. The DEIS shows only one side of the coin, the degree to

which the projections differ from one another, without showing the other – that these difference are marginal in the overall scheme of things, perhaps to the point of insignificance. HPE Report at 11-12. Moreover, the DEIS downplays the potential of the project to shift congestion rather than solving it.

The only indication of the small return on our potential investment that appears readily understandable to the public is buried in the appendices to the DEIS. A chart evaluating the range of "reasonable alternatives" shows they have potential to improve commutes on James Island by only 30-66 seconds, and travel time for the furthest trip, the commute from Johns Island, was projected to improve by only 4.1 to 5.6 minutes, even under the weighted analysis conducted by the agencies. DEIS App'x K at 2-115. Such paltry benefits do not justify this project. And, if the difference in regional mobility between the build and no build alternatives must be measured in seconds rather than minutes, there is effectively no difference at all.

"NEPA requires agencies to balance a project's economic benefits against its adverse environmental effects." *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446 (4th Cir. 1996). And, courts have recognized that the "use of inflated economic benefits in this balancing process may result in approval of a project that otherwise would not have been approved because of its adverse environmental effects," as well as "skew[] the public's evaluation." *Id.* The use of inflated transportation benefits is no different. After correcting the defects in the modeling process, the DEIS must present the results in a manner that "sharply defin[es] the issues and provid[es] a clear basis for choice among options by the decisonmaker and the public." 40 C.F.R. § 1502.14. And, the agencies must evaluate whether their proposal is worthwhile, not merely which variation on it they prefer.

E. The TSM Alternative Also Received Inadequate Analysis

The DEIS describes the Transportation Systems Management ("TSM") Alternative as an effort to improve the capacity, mobility, and safety of the existing road network with minimal capital expenditures. DEIS App'x K at 2-13. It lists strategies such as access management, pedestrian and bicycle facilities, construction of left-turn lanes, traffic signal optimization and coordination, improved signs and striping, roadway realignments, vehicle speed management, and high occupancy vehicle (HOV) lanes as examples of such cost-effective techniques. The DEIS also identifies problem roadways and multiple TSM strategies with the potential to improve those roads. DEIS App'x K at 2-19 to 2-30. It spends more than ten pages describing TSM strategies and their potential to reduce congestion and improve mobility and safety.

But, the DEIS does not analyze the TSM alternative. It only describes it. The agencies did not model the TSM alternative or make any other attempt to assess its merits. Instead, the DEIS states that the TSM alternative is by nature incapable of meeting the project's purpose and need. According to the agencies, even though the available TSM strategies identified in the DEIS "have the potential to enhance safety, capacity and mobility in localized areas" throughout the larger study area, "the benefits would not be provided throughout the entire study area, which is what the purpose and need of the project require." App'x K at 2-30.

It is unreasonable for the agencies to dismiss the TSM alternative without study. That "localized" improvements throughout the study area could improve mobility through the overall network "is not so facially implausible that it can be dismissed out of hand." *Dubois v. U.S. Dep't of Agric.*, 102 F.3d 1273, 1288 (1st Cir. 1997). "[I]ndividual roads and streets do not serve travel independently." AASHTO Greenbook at 4. "Rather, most travel involves movement through networks of roads." *Id.* Failing to consider this promising alternative violates NEPA. It also reflects poor stewardship of public funds for the agencies not to evaluate how an alternative they understood to be particularly cost effective stacks up against other options.

F. The Agencies Must Take Care To Properly Consider the Underlying Purpose and Need

NEPA regulations provide that "the statement shall briefly specify the *underlying* purpose and need to which the agency is responding in proposing the alternatives including their proposed action. 40 C.F.R. § 1502.13; 33 C.F.R. § 325, App. B(9)(b)(4) (emphasis added). Courts regularly have held that the statement of purpose and need should be defined to reflect the objective, general need for the proposed activity rather than the specific, narrow course of action preferred by the applicant. The rule as articulated by one federal appellate court is representative: "[T]he evaluation of 'alternatives' mandated by NEPA is to be an evaluation of the alternative means to accomplish *the general goal of an action*; it is not an evaluation of the alternative means by which a particular applicant can reach his goals." *Van Abbema v. Fornell*, 807 F.2d 633, 638 (7th Cir. 1986) (emphasis in original).

Further, [t]he stated goal of a project necessarily dictates the range of 'reasonable' alternatives and an agency cannot define its objectives in unreasonably narrow terms." *See Carmel-by-the-Sea v. United States Dep't of Transp.*, 123 F.3d 1142, 1150 (9th Cir. 1997). If the purpose is defined too narrowly, "only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality." *Citizens Against Burlington, Inc. v. Busey*, 290 U.S. App. D.C. 371, 938 F.2d 190, 196 (D.C. Cir. 1991).

The purpose and need statement in the DEIS states:

> The purpose of the Mark Clark Expressway Project is to increase the capacity of the regional transportation system, improve safety and enhance mobility to and from the West Ashley, Johns Island and James Island areas of Charleston.

DEIS at 2-1. Our interpretation of this statement of project purpose is that it is intended to capture any alternative that enhances mobility in the West Ashley, Johns Island and James Island areas of the Charleston region. Such a reading would allow for the evaluation of a meaningful range of alternatives – everything from completing I-526 with a highway to a network solution, like the NWTW, which involves redevelopment at key locations along the existing road network to give people more choices for purposes of avoiding congestion on major thoroughfares, thereby easing the burden on arterial roads and enhancing regional mobility. Moreover, a proper interpretation of the statement of project purpose would not limit the alternatives to those focused solely on vehicles – it should also include consideration of strategies to increase other

modes of travel, such as walking, biking, and transit, which also have the potential to enhance regional mobility and improve safety. We interpret the above statement in a manner that allows for a serious evaluation of the broad array of possible solutions.

However, to the extent that the agencies interpret the statement of project purpose to foreclose alternatives that do not involve the construction of new highways or parkways to and from West Ashley, Johns Island and James Island, then we would object to this statement as an artificial constraint on the consideration of a reasonable range of alternatives. In particular, it is important to recognize that improving mobility in the study area must be considered in terms of overall improvement in the movement of people and goods in the study area, not merely in terms of construction of a new road across the area or improvement to the travel time for arbitrarily selected-trips. As explained in our comments to the Corps, the Corps' statement of project purpose is, in fact, too narrow in that it is written in a way that automatically eliminates consideration of non-highway alternatives that address congestion, safety, and mobility in a specific part of the greater Charleston region and seeks to limit the universe of alternatives to highways that complete the link between the James Island Connector and the existing terminus of I-526 at Savannah Highway. Such an approach would violate NEPA.

Additionally, we are concerned that the agencies may be evaluating mobility too narrowly. As the HPE report explains:

> "Mobility" refers to the movement of people and goods. Current transportation planning practice defines "mobility" in broad terms, including movement by multiple modes of travel: motor vehicle, walking, bicycling and transit use. Although the purpose and need statement for this project specifies regional mobility enhancement as a strong goal, only motor vehicle mobility is measured in the primary values applied to the alternatives analysis. Increased walking, biking and transit can undoubtedly free up extra capacity on primary arterials that serve the entire region. However, no measure of effectiveness was applied during the DEIS to consider these other three travel modes.

HPE Report at 6-7.

II. The DEIS Ignores and Misleads the Public About Factors Essential to An Informed Decision

A. Safety

Safety is a paramount concern in federal and state transportation policy and of great concern to the public. As the AASHTO Greenbook explains, Congress has long emphasized highway safety, and in 1973 the House Committee on Public Works published a mandate declaring it "the responsibility of the Government," specially including FHWA and the state DOTs, "to see that maximum safety is incorporated into our motor vehicle transportation system" and that "[t]here is no retreating from this mandate, either in letter or in spirit." AASHTO Greenbook at 101. It is thus well-understood that the identification of potential safety problems and evaluation of potential alternative solutions is "of primary importance," as "[t]he

safety of the traveling public should be reflected throughout the highway program." AASHTO Greenbook at 106.

The DEIS identifies "improv[ing] safety." DEIS at 2-1, as a core purpose of the project. It further states that many of the road segments in the scoping area have crash and fatality rates greater than the state average, DEIS at 2-18, and safety is one of the "major traffic needs to be addressed" by the project, DEIS at 2-1.

In light of this purpose and need, the DEIS recognizes that the ability of an alternative to "increase safety on existing roads," DEIS at 3-38, is an important consideration both in determining whether an alternative is reasonable and in making a reasoned choice among alternatives. We agree that the ability of an alternative to increase safety on existing roads is an important factor that must be considered in the alternatives analysis.

Unfortunately, the DEIS does not include any analysis of the alternatives' efficacy, or lack thereof, in improving safety. Instead, it assumes, without citing any supporting authority or study, that "future crashes cannot predicted." DEIS at 338. Based on this assumption, it declines to analyze the alternatives' ability to reduce crashes and fatality rates, *i.e.* to improve safety, on existing roads. Instead, it uses the volume-to-capacity (V/C) ratio, a measure analyzed to assess congestion, as a proxy for safety. If an alternative improved the V/C ratio on a road segment even slightly, "safety was considered improved" as well. DEIS at 3-38. The DEIS counted only the number of segments whose V/C ratio improved and did not take into account the number of segments whose V/C ratio decreased. All of the alternatives were deemed to have "show[n] benefits to safety," and "no alternatives were carried through to the next round or were eliminated from the preliminary alternatives analysis based on safety statistics." DEIS at 3-38. In other words, the DEIS assumed all alternatives to be roughly equal in terms of safety solely by counting the number of segments on which a single factor used to measure congestion was even marginally improved and without discounting that figure to account for the other side of the coin – the number of segments on which that same measure was made worse.

This unreasonable approach violates NEPA in several respects. As an initial matter, it is based entirely on unsupported and unexplored assumptions. In preparing an EIS, agencies have an obligation to "ensure the professional integrity, including scientific integrity, of the discussions and analyses" and must "make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the EIS." 40 C.F.R. § 1502.24. "Conclusions that are reached without any study or support documentation are insufficient to satisfy an agency's NEPA obligations." *Ohio Valley Trail Riders v. Worthington*, 111 F. Supp. 2d 878, 884 (E.D. Ky. 2000). The DEIS does not cite any authority for its assumption that the likelihood of future accidents and fatalities cannot be analyzed or projected, and did not undertake any study to verify that assumption. It likewise does not provide any basis for presuming that an improved V/C ratio serves as an acceptable proxy for improved safety.

These unfounded assumptions are contradicted by readily-available sources that the DEIS did not make use of, including materials produced by FHWA and SCDOT and information cited or included elsewhere in the DEIS. Future crashes may not be predicted with psychic precision, but future crash and fatality rates can be and are projected by professional transportation

planners. To assist them in that task, experts in the field have developed not only predictive models, but also formulas, equations, and estimates. For example, FHWA has developed an "Interactive Highway Safety Design Model (IHSDM)," which it describes as a "decision-support tool" that "provides estimates of a highway design's expected safety . . . performance" through evaluation modules that include, *inter alia*, "Crash Prediction." FHWA IHSDM Overview, http://www.tfhrc.gov/safety/ihsdm/ihsdm.htm (last visited Sept. 21, 2010). The suite of software analysis tools is distributed free of charge via the internet and intended for use by highway project managers, state DOTs, and others. *Id.* Apparently, the most recent version of the "Crash Prediction Module (CPM) faithfully implements Part C (Predictive Method) of AASHTO's 1st Edition Highway Safety Manual (June 2010) for evaluating rural 2-lane highways, rural multilane highways and urban/suburban arterials." IHSDM Welcome Page, http://www.ihsdm.org/wiki/Welcome (last visited Sept. 21, 2010). Other examples include resources available to predict the safety impacts of the access management techniques, or lack thereof, incorporated into an alternative. The Transportation Resource Board has produced an "Access-Impact Calculator" CD-ROM associated with its NCHRP Report 420: Impacts of Access Management Techniques.

Furthermore, the DEIS itself contains information indicating that V/C is not a reasonable proxy for safety. A lay person can easily see that roads identified as having higher than average crash rates did not necessarily also have poor V/C ratios. And, professional consultants have confirmed that data does not support the agencies' assumption, as there is no correlation between the factors. HPE Report at 16. Moreover, the DEIS acknowledges and cites a range of sources explaining that factors other than congestion have a significant impact on safety. For example, the DEIS acknowledges that "[t]he number of crashes also increases with an increase in the number of decisions required of a driver (lane changes, turns, etc), and that "as the number of businesses, commercial development and driveways along a highway increases, the crash rate also increases." DEIS at 2-18. Inexplicably, however, the DEIS does not recognize these facts for what they are – confirmation that factors other than congestion affect safety and are indicative of future crash rates. Instead, it misleadingly (and illogically) presents factors such as the proliferation of commercial driveways as "less obvious ways" that congestion can reduce safety. DEIS at 2-18.

The failure to analyze or model the safety impacts of the alternatives skewed the results of the preliminary alternatives analysis, preventing safety from factoring in to the agencies' decision, and also presented a fundamentally misleading portrait to the public. Alternatives which, if fairly analyzed, would likely vary widely on this measure, are presented having no meaningful difference in safety improvement. Notably, SCDOT's Access and Roadside Management Standards estimate that just one of the techniques included in NWTW, replacing a two-way-left-turn lane with a non-traversable median, may be expected to result in a 15 percent - 57 percent reduction in crashes. SCDOT ARMS at 6. And, a study cited in the DEIS estimates that for each additional access point, such as the intersections incorporated in the preferred alternative, crash rates increase by 4 percent. The preferred alternative, which the agencies' acknowledge will make some streets more congested at the same time it removes some congestion from others, has the potential to shift additional traffic onto the more dangerous road segments identified in the study area. Importantly, the preferred alternative, if properly analyzed, might prove detrimental to the safety of existing roads with already above-average

crash rates such as River Road and Riverland Drive, as it is projected to increase traffic volume and congestion on those segments while also adding new conflict points.

The safety impacts of the alternatives must be analyzed, but the agencies have operated on the misleading assumption that their preferred alternative alleviates congestion and by extension would necessarily affect safety. These assumptions lead to a misleading narrative in the DEIS, which limits its discussion to "how congestion affects safety" rather than how safety can be improved. And, the DEIS wrongly suggests that factors such as access density are attributable to congestion, rather than a cause of it. As a result, the DEIS unfairly disadvantages and understates the benefits of alternatives such as NWTW, which address functional deficiencies that make existing streets less safe, and thereby provide safety-benefits beyond whatever as-of-yet-unstudied improvement might be expected from congestion relief.

In sum, it is arbitrary and irrational for the DEIS, which used crash and fatality rates to determine which road segments were dangerous and in need of safety improvements, not to use those same measures to determine whether and by how much the safety of those roads would actually be improved. The DEIS failed to make even the most minimal effort to analyze or disclose the safety implications of the alternatives. Instead, it engineered a misleading narrative and comparison and ultimately selected a preferred alternative that appears unlikely to improve safety and may even make the need for genuine safety improvements even more pressing.

B. Failure to Adequately Consider and Disclose Environmental Impacts

Wetlands and Water Quality

As described in greater detail in the attached comment letter to the U.S. Army Corps of Engineers, the proposed project raises significant concerns under the Clean Water Act. In sum, these problems include, but are not limited to the following:

- Because the underlying purpose of this project is not water-dependent, SCDOT must "clearly demonstrate" that no practicable alternatives exist that do not require a discharge into wetlands or other special aquatic sites. 40 C.F.R. § 230.10(a)(3). In other words, under the CWA, "the test is whether the alternative with less wetlands impact is 'impracticable,' and the burden is on the Applicant . . . with independent verification by the [Corps], to provide detailed, clear and convincing information *proving* impracticability." *Utahns for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1186 (10th Cir. 2002) (emphasis in original). As explained in the accompanying comment letter to the Corps, SCDOT cannot meet this burden given the manner in which the NWTW has been evaluated.

- The estimated impacts to wetlands from the NWTW are flawed in that the DEIS has likely overestimated the extent of these impacts by enlarging the right of way widths for the roads that comprise the NWTW alternative. The DEIS has similarly failed to determine the nature and degree of effect that the proposed discharge will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and failed to compare the relative function of resources to be impacted by the various

alternatives. In evaluating alternatives in the preliminary analysis, the DEIS also declined to count two categories of wetlands (estuarine and marine wetland and estuarine and marine deepwater) "because these types of wetlands were assumed to be bridged." DEIS at 3-40. Even though the highway alternatives may bridge over these types of wetlands, the failure to account for impacts to these categories of wetlands slants the alternatives analysis in favor of highway and parkway alternatives because there will still be significant impacts from the bridges to these wetlands due to construction activities and shading. Moreover, in spite of this arbitrary treatment in the DEIS, the NWTW is still estimated to have far fewer impacts to wetlands than any of the reasonable alternatives, which would result in permanent fill to between 15.85 and 29.39 acres of wetlands. See DEIS at 6-22.

- The proposed mitigation package is flawed too in that it does not appear as if the agencies are planning to conduct a robust watershed analysis to aid in the development of the compensatory mitigation plan and that the agencies are planning to use the SCDOT's Huspa Creek bank for impacts to tidal wetlands when that bank is not located in the Stono River watershed. Such an approach would conflict with the new wetlands compensatory mitigation rule and the Section 404(b)(1) Guidelines. *See* 33 C.F.R. § 332.3(b)(1) and 40 C.F.R. § 230.12 (a)(3)(ii) (prohibiting permit issuance where "[t]he proposed discharge will result in significant degradation of the aquatic ecosystem . . ."). The failure to mitigate for impacts to tidal wetlands within the Stono River watershed is particularly troubling in light of the fact that portions of the Stono River watershed are already failing to meet applicable water quality standards.

- Significant aspects of this project, including construction methods and stormwater strategies, which relate to the ways in which this project threatens to impact wetlands and other aquatic resources, remain unstudied at this point in the process. The method of constructing bridges across the marshes and the Stono River could have substantial impacts, particularly on salt marshes, yet the agencies remain undecided regarding which method of construction to employ. Even less is disclosed in the DEIS regarding the manner in which the agencies plan to address stormwater. It can be expected that the new parkway, including its bridges, would discharge large volumes of polluted runoff to wetlands and already impaired waterbodies. It is important that the agencies devise strategies to treat this stormwater, yet no treatment methods are discussed in the DEIS. Further, depending on how these treatment facilities are designed, they may have to be sited in wetlands, which would increase the amount of wetlands to be impacted by the project.

- In addition to lacking information on stormwater to be generated by the new highway or parkway itself, the DEIS lacks an adequate discussion regarding the increased polluted runoff that will be discharged to wetlands, creeks, and the Stono River by the development that will be induced by this project, especially the substantial increase in growth that is anticipated on Johns Island.

Air Pollution and Climate Change

The DEIS also fails to adequately consider and disclose impacts to air quality and the effect of the proposed project on climate change. The DEIS indicates that the agencies have been told the area will remain in attainment for ozone and particulate matter if the project is built. But, it does not analyze impacts or explain this conclusion. Moreover, the DEIS simply assumes that air quality will remain the same or improve because the project will reduce VMT. But, even crediting the agencies skewed modeling, the reduction in VMT would be minimal and easily offset by the impacts to air quality and emissions impacting climate change resulting from induced traffic and sprawling development patterns encouraged by the proposed project. Building a highway that will induce sprawl into rural areas and divert population growth away from the part of the region in which job growth is expected to be concentrated will have dramatically different air quality impacts than the no action and functional alternatives, such as the NWTW, which make local vehicle trips more efficient and encourage less polluting travel modes. The DEIS does not consider these difference between alternatives. And, the DEIS cannot use the perceived nature of climate change as a global problem to avoid considering the contribution of this project, especially in a low-lying community such as Charleston where sea level rise and an increase in storm frequency and volume present such serious concerns.

Environmental Justice

In evaluating impacts to local communities, the EIS must consider the effects on minority populations. The Executive Order on Environmental Justice, Exec. Order No. 12898, 59 Fed. Reg. 7629 (1994) requires that any highway that affects a minority community must be evaluated for disproportionate adverse impacts on such communities. According to the EDAW Study, over 25 percent of James Island's population is African American, and 50 percent of Johns Island's population is comprised of minority communities. Id. at p. 4. The recent history of the coast of South Carolina is filled with examples of minority communities that have been displaced when bridges or highways lead to intensified development pressure and the loss of "heirs property" due to increased taxes and other factors. The DEIS fails to contain an adequate evaluation of how the proposed project will impact resident minority communities.

III. Failure to Consider Inconsistency with Comprehensive and Community Plans

FHWA policy on implementing NEPA directs the agencies to assess the consistency of the alternatives they analyze with the long-range plans adopted by the affected localities. And, under 23 U.S.C. § 128, the agencies must certify that they have considered their proposal's "consistency with the goals and objectives of such urban planning as has been promulgated by the community," as well as broader "economic and social effects." 23 U.S.C. § 128(a). "'[C]onsider' in this context means to investigate and analyze," and adequate consideration requires "the aid of a detailed EIS." *City of Davis*, 521 F.2d at 679. The DEIS fails to fulfill these requirements.

Although our region has made a substantial investment in comprehensive and community planning, the DEIS does not consider the consistency of the agencies' preferred alternative with these plans. And, the agencies did not weigh any alternatives' consistency with the area's land-

use plans and goals in narrowing their range of "reasonable" alternatives. The DEIS addresses this factor only by noting that the proposed Mark Clark Expressly extension has been proposed and shelved at various times since the 1970s and is therefore included in long-range transportation plans in the CHATS model. As an initial matter, the CHATS plan recognizes that "major construction issues such as environmental issues, existing development, and significant bridge construction over the Stono River" would "need to be addressed" before the proposed project could materialize. More importantly, the agencies cannot use the assumption that the project has somehow been grandfathered into the region's land-use plans to avoid analyzing whether it comports with the area's present goals.

In reality, the agencies' preferred alternative is fundamentally incompatible with the region's urban planning and its community and land-use goals. As the DEIS notes, most of the project is within the Urban Growth Boundary ("UGB") (designated by Charleston County as a planning boundary to separate urban/suburban from rural growth). As the DEIS also recognizes, "[]the overall goal of the boundary is to promote infill and redevelopment in order to control urban sprawl." DEIS at ES-5; DEIS at 5-20. It became part of the County of Charleston Comprehensive Plan in 1999 and has since been incorporated into other plans, including the City of Charleston Century V City Plan and the Johns Island Comprehensive Plan. Johns Island Community Plan at 2. The DEIS does not disclose that the Mark Clark Community Impact Assessment prepared for this project (but omitted from the DEIS) recognizes that the highway expansion could accelerate and increase the development that the UGB sought to slow and limit and gradually break down the boundary. The study explains that development pressure brought to bear by the expansion of the highway could result in the "leapfrogging of development" beyond the UGB, which "could gradually blur the critical distinction between rural and urban areas." Community Impact Study at 20. The DEIS did not consider the potential for the Mark Clark extension to erase the UGB by directing development pressure toward the rural areas whose unique character the boundary aims to protect. Instead, the DEIS acknowledges that land-use changes will result from the proposed highway expansion, but attempts to downplay their nature and significance by suggesting, for example, that the public will have an opportunity to comment on the anticipated zoning changes before they occur. DEIS at 5-20. In addition, it misleadingly states that the no-build alternative would reduce mobility and thereby somehow defeat the UGB's goals of infill and revitalization. DEIS at 5-20.

Not only is the core proposal for the Mark Clark Expansion irreconcilable with the affected areas' overall development strategy, the preferred alternative further undermines community planning on Johns Island through two new intersections channeling the traffic induced by the parkway onto scenic River Road. The new intersections would require widening of the existing right of way to accommodate construction of new turn lanes. "Because of the extraordinary canopy created by stands of trees along extensive portions" of River Road, however, the community previously decided that "the prospect of road widening is not acceptable." *Id.* at 21. As the DEIS notes, tree preservation is a "key" issue in the Johns Island's Transportation Plan because the "Tree canopies" represent "an important component to this area's character." DEIS at 5-12. Additionally, the Johns Island Community Plan calls for commercial development to be concentrated in nodes along a specific stretch of Maybank Highway. By bypassing this stretch of Maybank Highway in favor of River Road, the preferred alternative also frustrates the efforts to encourage these "gathering places," *id.* at 23.

Consistency with the applicable land-use plans should have been one of the central criteria used to develop the alternatives analyzed in the DEIS. The agencies, however, did not investigate, analyze or weigh the likelihood their preferred alternative would undo more than a decade of community planning. Instead, they adopted criteria weighted in favor of a highway alternative and against the goals of the plan. Of the four principal criteria used to develop alternatives, three are weighted against infill and urban redevelopment and towards a highway built across the Stono River. These criteria include targeting undeveloped areas, minimizing both relocations and exercises of eminent domain that do not require the taking of entire parcels, and choosing a place to bridge the Stono River.

IV. The Failure to Consider the Impact of the Boeing Plant Is Unreasonable

The DEIS did not take the impact of the Boeing aircraft assembly plant planned for North Charleston into account "because of the date of the announcement," but states that information will be included in the FEIS "as it becomes available." DEIS at 2-8. The announcement of the Boeing plant, however, was made well in advance of the DEIS's publication, and it is unreasonable not to take a development of this magnitude into account in assessing the need for the project, calibrating the traffic models, and considering the impacts of the preferred alternative. The Boeing plant has the potential to generate more than 15,000 jobs and an accompanying "retail [and] commercial boom" in the I-26 corridor between North Charleston and Summerville, as a population influx into Berkeley County for which plans are already underway. Daniel Brock, *Boeing Could Mean Retail, Commercial Boom for Moncks Corners, Summerville*, Charleston Regional Business Journal (Sept. 17, 2010). By inducing population growth away from that area and into the study area, the project could encourage longer commutes toward this center of employment, increasing the burden on the road network and the air pollution and other impacts of the increased commutes.

V. Construction of the Preferred Alternative Would Violate Sections 4(F) and 6(F)

Section 4(f) implements "the policy of the United States Government that special effort should be made to preserve the natural beauty of . . . public park and recreation lands . . . and historic sites. 23 U.S.C. § 138; 49 U.S.C. § 303(a). The statute reflects a recognition "that in most cases considerations of cost, directness of route, and community disruption" will create pressure to use parklands for highway construction and seeks to preserve these public resources. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971), *overruled in part on other grounds by Califano v. Sanders*, 430 U.S. 99 (1977). Section 4(f) prohibits the use of publically-owned parklands and historic sites for highway construction unless: (1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area . . . or historic site resulting from the use." 23 U.S.C. § 138; 49 U.S.C. § 303(c). The terms "feasible" and "prudent" are defined by regulation, *see* 23 C.F.R. § 774.17.

The agencies did not attempt to apply the applicable regulations in deciding that there were no feasible and prudent alternatives to their proposal, which uses multiple Section 4(f) resources: it would carve off part of the James Island County Park, displacing the climbing wall

and bouldering cave, bridge the West Ashley Greenway, and also uses the Fenwick Hall Historic District. The agencies reasoned that non-highway alternatives would not meet their needs and all 35 of the highway alternatives they considered impact at least one Section 4(f) resources. All of the alternatives included in the DEIS's range of reasonable alternatives use multiple Section 4(f) resources, and the agencies decided that as a result there is no feasible and prudent alternative that avoids impacts to Section 4(f) resources. This approach falls far short of satisfying Section 4(f) for two reasons. First, the agencies ignored feasible and prudent alternatives. Second, the agencies did not make the necessary effort to minimize harm to Section 4(f) resources.

As explained above, the agencies can meet the purpose and need of this project through alternatives like NWTW that do not require building a highway through recreation areas and historic sites. And, given the minimal transportation benefits of the proposed project, which serves primarily to shift congestion to different areas and does little to improve overall conditions, the no build alternative is reasonable under the circumstances present here. Furthermore, the agencies could adjust the alignment of their preferred alternative, or develop other highway alternatives, to avoid federally-protected parklands and historic sites. The DEIS states that the agencies rejected the idea of avoiding James Island County Park because shifting the alignment slightly would require an additional 8-10 relocations and impacts several ponds. These do not amount to the "unique problems" or "unusual factors," 23 C.F.R. § 774.17, that could justify paving over the county park. The desire to avoid a modest increase in relocations is precisely the type of motivation that prompted Congress to enact Section 4(f), and the agencies do not demonstrate that the impacts to the private ponds and canal would be severe or result in more environmental harm than destruction of 3.41 acres of public parkland. More generally, the agencies have not shown that they are incapable of building a highway that does not damage the unique resources preserved through Section 4(f). That the alternatives they considered did not avoid these resources does not mean that it would have been infeasible to design an alternative that did. An alternative is not "feasible," only if it "cannot be built as a matter of sound engineering judgment." 23 C.F.R. § 774.17. And, because the design criteria were weighted toward using less developed land and minimizing relocations, the agencies weighted the process towards developing alternatives such as Alternative G that make use of parks to avoid impacts to developed areas. Had the agencies instead weighted their criteria against the use of parks and recreation areas, the range of alternatives would likely have looked different. It was arbitrary and capricious for the agencies not to make avoiding protected parks and recreation areas a priority, particularly where they did make some effort to avoid the historic resources that Section 4(f) also protects.

Moreover, even if Section 4(f) resources cannot be avoided altogether, the agencies must still select the alternative that does the least harm, and the draft Section 4(f) statement does not provide the detailed analysis necessary to show the agencies have complied with this requirement. Section 4(f) requires agencies to undertake "all possible planning to minimize harm," 49 U.S.C. § 303(c)(2), and the agencies' evaluation does not show that this has been done. Section 303(c)(2) "requires a simple balancing process which totals the harm caused by each alternate route to section 4(f) areas and selects the option which does the least harm." *Druid Hills Civic Ass'n. v. Federal Highway Admin.*, 772 F.2d 700, 716 (11th Cir. 1985). After undertaking this inquiry, a route "can still be rejected if it is infeasible or imprudent," but "the determination whether the route is infeasible or imprudent is based on factors other than the

route's impact on section 4(f) areas." Id. Here, the agencies combined the two steps of this inquiry and deemed alternative routes imprudent largely because they also impacted Section 4(f) resources. All of the alternatives analyzed in the DEIS were alternatives that the agencies considered reasonable means of accomplishing the project purpose, so all should be considered feasible and prudent, and the agencies have a duty under 4(f) to ascertain and select the alternative with the least impact to protected resources.

Finally, because the agencies have not yet conducted an adequate alternatives analysis, they have not complied with the prerequisites for converting part of James Island County Park, which is also a Section 6(f) resource, to a non-recreational use.

VI. Protective Buying

Our review of the SCDOT's file for this project indicates that during this ongoing NEPA process SCDOT has been pursuing the acquisition of properties that lie in the path of a number of the reasonable alternatives, including the recommended preferred alternative. *See* Mark Clark Expressway: Preferred Reasonable Alternative (Route G) and Intersecting Parcels attached hereto as Ex. C. For example, it appears that in January 2009, SCDOT reached an agreement with Stonoshields, LLC to purchase 21.04 acres of land on Johns Island, known as Sabal Palms (TMS # 345-00-00-080) for $2 million because a number of the selected build alternatives would have to be constructed through this property. It also appears that SCDOT has pursued other properties, including 25.2 acres of property on Johns Island that is part of The Retreat – Phase IV, and a home in the West Ashley area that was located along a previously identified alignment in the West Ashley area.

Although federal regulations provide for early protective acquisition during the NEPA process under certain, exceptional circumstances "to prevent imminent development of a parcel which may be needed for a proposed transportation corridor," it must be shown "that such development is imminent" and "[a]dvance acquisition is not permitted for the sole purpose of reducing the cost of property for a proposed project." 23 C.F.R. § 771.117(d)(12)(ii). We are concerned that purchases of these properties do not fall within these exceptional circumstances and demonstrate how this process has been biased in favor of extending the highway to the detriment of other alternatives, such as the NWTW.

Conclusion

We appreciate the opportunity to submit these comments on the DEIS for the I-526. For the reasons described herein, we believe the evaluation of the League's proposed NWTW deserved a careful evaluation under the National Environmental Policy Act, the Clean Water Act, the Department of Transportation Act, and other federal and state laws. We believe that a fair vetting of the reasonable alternatives, and their relative positive and negative impacts, would have shown that a functional approach to the current traffic issues will provide the greatest opportunity for solving the transportation problems in the project areas. Nevertheless, the joint lead agencies declined to apply appropriate modeling techniques and eliminated the NWTW at the earliest possible stage of the analysis. In doing so, the DEIS relied on a contrived tiered process, inappropriate modeling techniques, and unreasonable assumptions to eliminate

reasonable alternatives from consideration and to obscure the meager transportation benefits provided by the recommended preferred alternative. We respectfully request that the agencies cure the following defects in the DEIS before proceeding further.

Sincerely,

Christopher K. DeScherer

Lisa M. Saltzburg

Enclosures

cc: Chuck Hightower, DHEC
Mark Giffin, DHEC
Susan Davis, SCDNR
Bob Perry, SCDNR
Pace Wilber, NOAA Fisheries
Mark Caldwell, USFWS
Ramona McConney, EPA
Robert Lord, EPA
Josh Martin, League
Kate Parks, League
Julie Hensley, Charleston County Park & Recreation Commission
Barbara Neale, OCRM

Ex. A

HPE
Hall Planning & Engineering, Inc.

Report on the Mark Clark Expressway Extension Draft Environmental Impact Statement

Prepared For

South Carolina Coastal Conservation League
328 East Bay Street
Charleston, SC 29402

by

Hall Planning & Engineering, Inc.
322 Beard Street
Tallahassee, FL 32303
(850) 222-2277

Richard A. Hall, P.E., SC PE #26439
Tracy L. Hegler, AICP
DeWayne Carver, AICP

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About the Authors

Richard A. Hall, P.E., President of Hall Planning and Engineering (HPE), is a registered transportation engineer dealing with planning, design and regulatory issues in the transportation field. After earning his Bachelor's (1971) and Master's (1972) degrees in Civil Engineering at Virginia Tech, he worked for the Florida Department of Transportation for eight years. He first served as FDOT's representative to the Miami Urban Area Transportation Study technical committees. Mr. Hall later worked as the Regional Planning Engineer for the urban studies in the Tampa Bay Region and finally was responsible for training and research in urban transportation modeling. His research work initiated the FDOT urban travel modeling process in wide use today. Since becoming a consultant in 1980, Mr. Hall has worked on a variety of projects including Urban Transportation Plans, Developments of Regional Impact, hurricane evacuation planning, level of service analysis, scenic highway planning and Transportation / Land Use interrelationships.

Tracy L. Hegler, AICP, serves as a Senior Transportation Planner with HPE developing designs and reports for multi-modal transportation programs. Her work centers on traditional neighborhood development (TND) principles, with development structure identified first, then transportation solutions devised to fit the specific, desired context. Prior to joining HPE, she worked with the Florida Space Authority as Director of Planning and Spaceport Transportation where she was responsible for developing a Five Year Work Program for the state of Florida's space-related transportation needs and assisted in coordinating with NASA and the USAF on the long-range comprehensive master planning for the Cape Canaveral Spaceport. In this role she was responsible for developing the state of Florida's space transportation system through coordinated planning efforts with the U.S. and Florida Departments of Transportation, NASA, USAF and commercial space enterprise. Ms. Hegler is a member of Congress for the New Urbanism and the American Planning Association at both the national and state of Florida and South Carolina levels. She has a Bachelor of Arts in Sociology from the University of South Carolina (2000) and a Master of Science in Urban and Regional Planning from Florida State University (2007).

DeWayne Carver, AICP, has experience in form-based coding, transportation planning, land use planning, transit, and transportation demand management. As a Senior Project Manager with HPE, Mr. Carver provides expertise and technical assistance with thoroughfare design and evaluation, traffic circulation and operations planning, emergency vehicle access, and bicycle and pedestrian planning. He has served as an instructor in the SmartCode workshop series, specializing in the transportation elements of form based coding. Mr. Carver is a League Cycling Instructor (LCI) with the League of American Bicyclists and specializes in bicycle and pedestrian planning in the traditional neighborhood design context. Mr. Carver served as the Transit Planning Administrator for TalTran, the City of Tallahassee's transit system, where he managed Federal Transit Administration projects, prepared and managed the agency budget, and provided the primary connection between TalTran's fixed route service and the various citizen and community groups that ride or are interested in public transit. Mr. Carver holds a Bachelor of Arts in Urban Studies from the University of Tennessee (1991) and a Master of Regional Planning from the University of North Carolina at Chapel Hill (1993).

I. Executive Summary

The review process for the Mark Clark Extension (MCE) project as documented by the draft Environmental Impact Statement (DEIS) was fundamentally flawed in a manner that has precluded an accurate and reasonable evaluation of alternatives.

- The evaluation of alternatives in the DEIS is flawed because the joint lead agencies, including the South Carolina Department of Transportation (SCDOT), the Federal Highway Administration (FHWA), and Charleston County declined to apply industry standard modeling techniques to evaluate the relative benefits of various alternatives, including the New Way to Work – a network solution that was developed by Glatting Jackson Kercher Anglin (Glatting Jackson), a leading, nationally recognized transportation consulting and design firm. Specifically, the agencies failed to use an industry standard modeling tool, such as SYNCHRO™, to capture any meaningful benefits of the alternative developed by Glatting Jackson. After deciding not to use SYNCHRO™ (or a similar technique) to analyze the NWTW, the agencies eliminated the NWTW at the earliest possible stage in this process and then opted to use SYNCHRO™ in latter stages of the development of the DEIS to evaluate the group of highway alternatives that the agencies identified as the reasonable range of alternatives. The regional-scale demand model that was used in the first round of analysis simply does not allow for the fine grained analysis necessary to accurately represent the NWTW's network of streets. Consequently, the model did not accurately reflect the ability of the streets comprising the NWTW to provide additional capacity for regional through trips. This resulted in an inaccurate assessment of the traffic delay estimate, resulting in the elimination of NWTW in the first cut of analysis.

- The agencies' decision to apply a single land use assumption for all alternatives no matter the type of alternative under consideration further skews the alternatives analysis in the DEIS. By applying a single land use model that consists of a highway pattern of development to non-highway alternatives, the agencies constructed an evaluation process that was biased in favor of highway solutions as opposed to other feasible alternatives, such as NWTW and transit. The DEIS further failed to account for the compact urban development pattern proposed in the NWTW and its impact on land uses and subsequent traffic generation and attraction.

- The agencies' evaluation of the NWTW was further flawed in refusing to even consider key elements of the NWTW, such as the privately-funded portions of the proposed road network and the consolidation of driveways, and by actually amending other portions of the NWTW, such as the widths of the various streets or right-of-ways that comprise the NWTW street network. The refusal to consider privately-funded elements of the NWTW resulted from the agencies' erroneous conclusion that only "public" streets should be modeled. In fact, the type of local public and private streets included in the NWTW proposal are typically present in regional modeling analyses projects such as this.

- Although safety was included as a significant element of the stated purpose of the MCE project, the agencies failed to apply industry standards in evaluating the alternatives for purposes of safety. Further, the measures used by the agencies to support the assertion that the preferred recommended alternative will improve safety were not appropriate, and therefore, any conclusion by the agencies that any of the reasonable

alternatives studied would improve safety of the regional transportation network is unreliable.

- In portraying the results of this flawed analysis in the DEIS, the agencies present an erroneous picture by overstating the benefits to be derived from the recommended preferred alternative when their own results show that the differences between the recommended preferred alternative, the no-build, and the NWTW are so slight that they cannot be accurately measured by the modeling techniques relied on by the agencies. Moreover, if the agencies had followed minimum industry standards and readily available techniques, the assessment of the NWTW would have been radically different and would have shown that the NWTW is equal to or superior to the other alternatives considered as part of this process in achieving the stated purpose of the project.

II. The Modeling Techniques Used by the Agencies Were Flawed

A. Growth Projections (Single Projection for 2035)

The use of a single projection for 2035 is an unreasonable method for examining so many unique and divergent alternatives. Projections of regional growth are needed to adequately plan for all public infrastructure. The Council of Governments serving as the Metropolitan Planning Organization for the Charleston region maintains the travel demand models which assist in area-wide transportation analysis. These travel demand models result in trip generation and attraction produced by a certain land use distribution.

When dramatic differences appear in the distribution of future growth, then additional land use distributions are common practice. The significantly different development pattern assumed by the NWTW would have required this sort of additional land use distribution.

A single estimate of 2035 land use projected for the area is a significant problem in the application of travel models for the DEIS. While evaluating a freeway alternative, one must adequately reflect the spatial distribution of future growth assuming that a freeway is constructed. Analysts forecasting the distribution of future growth would, logically, assume the freeway is included in the future long-range transportation plan network constructed at the time period in question, in this case 2035.

The problem occurs when an alternative without a new freeway network is the subject of the alternatives analysis. NWTW, for example, assumes a fine-grained network is added along existing arterial thoroughfares. Since this scenario assumes no new bridges or long expanses of new arterial network, it is inappropriate to assume a land-use forecast predicated on the inclusion of a new freeway section.

This point was clearly stated during a meeting with SCDOT, attended by CCL and HPE on February 10, 2009, that an additional 2035 projection of land-use would be necessary to accurately simulate the travel benefits from NWTW and accurately model other non-highway alternatives. Multiple attempts were made to clearly indicate that the impact of NWTW's street network would not be picked up in the regional model and that it would therefore be unreasonable to measure the NWTW and the highway alternatives by the same method. The agencies simply declined to develop a reliable and appropriate methodology for analyzing NWTW.

Instead, the DEIS states that to "properly compare and to ensure consistency in the evaluation of all the alternatives for the proposed MCE project, a single, consistent land use scenario has been applied to the traffic analyses" and continues "the original land use scenario that was used in the analysis and land use information provided in Chapter 4 of the New Way To Work: Implementation Analysis – October 2009 was not included" (p. 3-76). The DEIS claims that an additional 2035 land-use forecast was avoided since projected development would likely happen regardless of the presence of new I-526.

To assume the single 2035 projection is adequate to test the NWTW alternative, one must also assume that little to no relationship exists between major thoroughfare construction and adjacent land development; a premise universally accepted as false.

B. The Agencies' Inconsistent Use of SYNCHRO™ Was an Inappropriate Deviation from Standard Practice

The supply side of travel modeling is represented by the network of thoroughfares, digitally coded to facilitate traffic assignment estimates. Trips are assigned to given thoroughfares based on the link capacity and speed. The primary determinant of capacity is the number of lanes available, followed by the percentage of through green time available at intersections with traffic signals. The travel simulation models, like those used by COG, were initially developed to estimate the number of lanes required on varying thoroughfare types. The same models cannot accurately refine the travel delay estimates based on percentage of green time available, a finer grained parameter.

While the COG models may be able to estimate the average system-wide vehicle delay for a group of similar freeway alternatives, they are inadequate for determining NWTW performance. The subtleties of trip generation for walkable compact urban places requires a manual trip generation process, using computer spreadsheets, as opposed to the COG trip generation models, for which walking trips were never calibrated at the outset. A manual trip generation and mode split calculation should have been used for each area where NWTW urban design structure was proposed.

Another key feature of NWTW is the intent to close driveways and curb cuts as redevelopment occurs. This fine detail is known to improve vehicular travel, but the benefits are not accurately detected in the broader COG models.

For these reasons, it was unreasonable for the agencies not to use SYNCHRO™ (or a similar tool that can measure the benefits of fine grained network solutions). All three performance measures; vehicle miles of travel (VMT), vehicle hours of travel (VHT) and delay, would have been much more accurate for NWTW, had SYNCHRO™ models been applied to reflect the significant benefits of capacity balancing among signalized intersections and reduced motor vehicle trip demand, applied from the manual trip generation and mode split calculations described above.

Despite the agencies refusal to use SYNCHRO™ for NWTW, the agencies did use SYNCHRO™ on other alternatives in later stages of analysis.

C. The Modeling Techniques Used by the Agencies Were Biased in Favor of a Highway Alternative

The flawed modeling prevented NWTW from achieving higher performance for the three major DEIS traffic measures: VMT, VHT and delay. This is because the analysis methods were applied at too coarse a scale. Several factors explain the weakness of the travel demand models to properly assess the diversity of alternatives before the agencies.

First, the reduction in vehicle miles of travel associated with NWTW will be accomplished via motor vehicle trips diverted from the arterial thoroughfare system and by shifts to bicycling, walking and transit travel modes. Earlier travel analysis performed by CCL and Glatting Jackson for the NWTW report stated that 44% of trips on Savannah Highway travel through the corridor and that 51% of the trips started or ended in the corridor. A small but significant number of trips (5%) have both ends in the corridor

Long Distance Trips in 2030	
Trips Totally within the Corridor	5%
Trips that Start or End in the Corridor	51%
Trips Through the Corridor	44%

Table 1: Trips Type for Savannah Highway

Based on these characteristics, at least 18% of the trips occurring on the average NWTW corridor are assumed to divert to existing and newly created streets at the arterial's edge. Hypothetically, a peak hour directional flow of approximately 2,000 vehicles per hour, when reduced by 18%, would result in arterial flow of just over 1,600 trips (2,000 – 360 = 1,640 trips). This reduction of 360 peak hour directional trips over a 5 mile roadway stretch would yield a VMT reduction of 1,800 vehicle miles. With three separate sections of NWTW corridor, this would equal 5,400 peak hour VMT reduction, in only one direction of travel flow. For a rough daily VMT reduction estimate, 40,000 vehicles per day times 0.18 diverted trips x 15 miles, equals 108,000 vehicle miles reduced. Granted these estimates are very rough, but given the adequate analytical resources, refined calculations should have been accomplished and applied within the DEIS process. (Note that the above calculation is solely based on the diversion of motor vehicle trips from the arterial and takes no credit for the degree to which mode shift to walking and biking and transit would further reduce motor vehicle miles of travel in each corridor).

More motor vehicle capacity is made available on existing thoroughfares in the study area based on enhanced development patterns and fine grid networks. Clearly the COG travel models are not sufficiently refined to perform these calculations. When the DEIS team refused to attempt these calculations, after hearing about the need for such refined techniques during the February 10, 2009 meeting with SCDOT, attended by CCL and HPE, the NWTW alternative was clearly set up for failure in the subsequent alternatives analysis process.

Second, it should also be noted that the COG travel demand models are not developed or calibrated to reflect the higher degrees of walkabilty, bikeability and transit friendliness inherent in the compact, urban development patterns assured by NWTW.

"Mobility" refers to the movement of people and goods. Current transportation planning practice defines "mobility" in broad terms, including movement by multiple modes of travel: motor

vehicle, walking, bicycling and transit use. Although the purpose and need statement for this project specifies regional mobility enhancement as a strong goal, only motor vehicle mobility is measured in the primary values applied to the alternatives analysis. Increased walking, biking and transit can undoubtedly free up extra capacity on primary arterials that serve the entire region. However, no measure of effectiveness was applied during the DEIS to consider these other three travel modes. Proper consideration of the multimodal interrelationships along and between these corridors involves applying internal capture and trip capture parameters to development adjacent to the thoroughfares, thereby reducing motor vehicle trip loadings. Subsequent analysis with SYNCRO models or other operational analysis programs is needed to yield a reliable analysis of the multi-modal nature of NWTW.

D. The Agencies' Refusal to Consider the Privately-Funded Components of the NWTW Was Arbitrary

The NWTW network was not modeled in a manner consistent with standard regional COG modeling techniques for loading vehicle trips from local streets.

The DEIS modeled only the publicly-funded roads that were proposed as part of the NWTW.

The failure of the agencies to model the entire NWTW, including publicly and privately-funded roads, was flawed. A proper analysis would include the effect of trips distributed on the finer NWTW network, but would not include explicit coding of the finer network links within the COG model network. In other words, the finer grained network should have been taken into consideration only as the final trip distribution to and from NWTW arrives at the arterial network. An example of fine grained NWTW network is shown on the bottom half of the following figure. Although the fine network need not be coded into the COG network, the effect of a finer grain network is shown by the traffic loadings shown traveling westbound on the arterial. The summation of each left turn loading adds to 196. These traffic loadings should have been calculated by manual loading to the network in question.

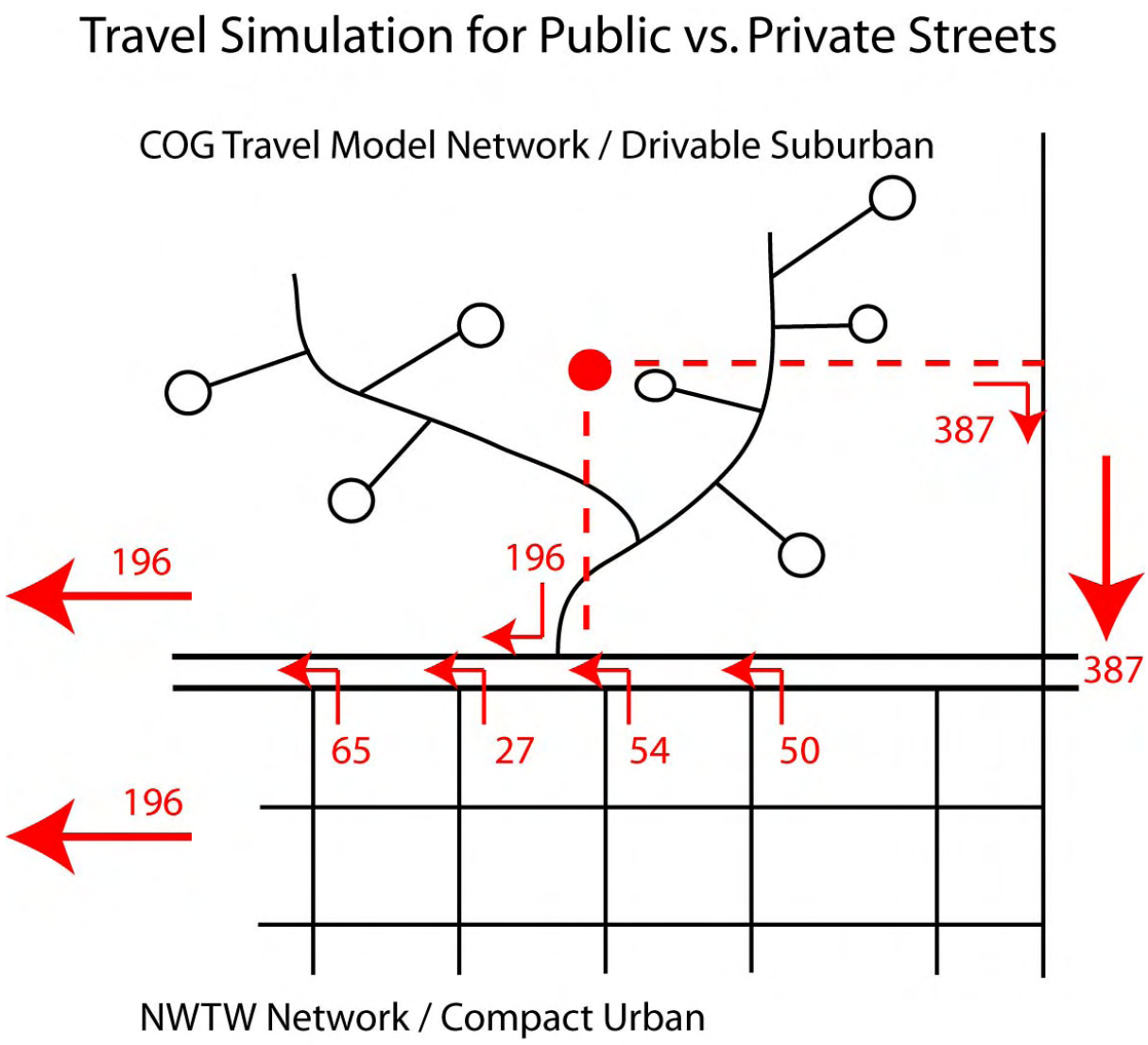

Figure 1: Travel Simulation for Public versus Private Streets

This procedure has a strong parallel to the standard COG modeling process. Unspecified local streets, as shown on the upper portion of the following figure, are not explicitly modeled. They are however, loaded to the arterial network by the use of hypothetical centroid connectors, represented by the dashed lines. Centroid connectors are links connecting centroids (nodes representing the center of a transportation analysis zone) to the transportation network.

The same 196 westbound arterial trips would be synthetically loaded at one centroid connector using the basic COG travel demand models. Both the explicit and the generalized loading of street connections at the arterial are accomplished in a compatible fashion. The only difference is the structure of the street system, assumed as a suburban pattern on the north and compact urban patterns to the south.

This demonstrates that it is no more speculative to analyze NWTW's public and private network than it is to analyze cul-de-sacs in regional models. In order to fairly evaluate the NWTW,

NWTW's private streets should be represented like centroid connectors in the SCDOT regional models. Failure to do so skews the analysis in favor of the highway and parkway alternatives. Moreover, the publicly-funded roads can be expected to result in the private redevelopment as depicted in the NWTW, and therefore, should have been modeled for this additional reason as well.

E. The Manner in which the Agencies Characterize the Results of the Modeling is Misleading

The SCDOT has an obligation to provide a clear and fair analysis of the alternatives studied. The DEIS should provide enough detail and information that the public can understand the issues and decision-makers can make informed decisions. Throughout the review of this DEIS, HPE discovered a number of stated issues that were either misleading or did not fully disclose the weakness in the argument. These issues are described below.

1) Supply and Demand

The DEIS analysis process failed to apply models appropriate for the finer grained scale of the NWTW alternative. This scale error impacts both the supply and demand sides of the travel simulation model. The demand side represents the generation of trips, their distribution across a thoroughfare network (yielding trip tables) and, finally, the split into specific travel modes of each estimated trip table. The COG models handle trip generation accurately, especially when traffic analysis zone land-use forecasts are accurate. Accurate trip distribution and mode split estimates, however, are significantly more difficult to achieve with the COG models.

From the perspective of data produced during model application, trip generation produces two numbers for each traffic zone; the levels of trip production and trip attraction. Thus, the generation model yields two columns of numbers for zone 1 through n (last zone number). Trip distribution, the next step, must distribute these two columns of numbers across a matrix showing zones of origin and destination, thereby splitting these numbers into dozens of finer estimates within trip tables. Finally, mode split calculations further divide the total trip tables into three or more travel modes, thus splitting the several dozen numbers into three times that number of estimates. Logically, as data are subdivided into finer and finer categories the accuracy of subsequent numbers decreases significantly, yielding an increased lack of precision. The following figure illustrates the complexity of number processing in the travel demand modeling steps, and the decreasing accuracy with every step.

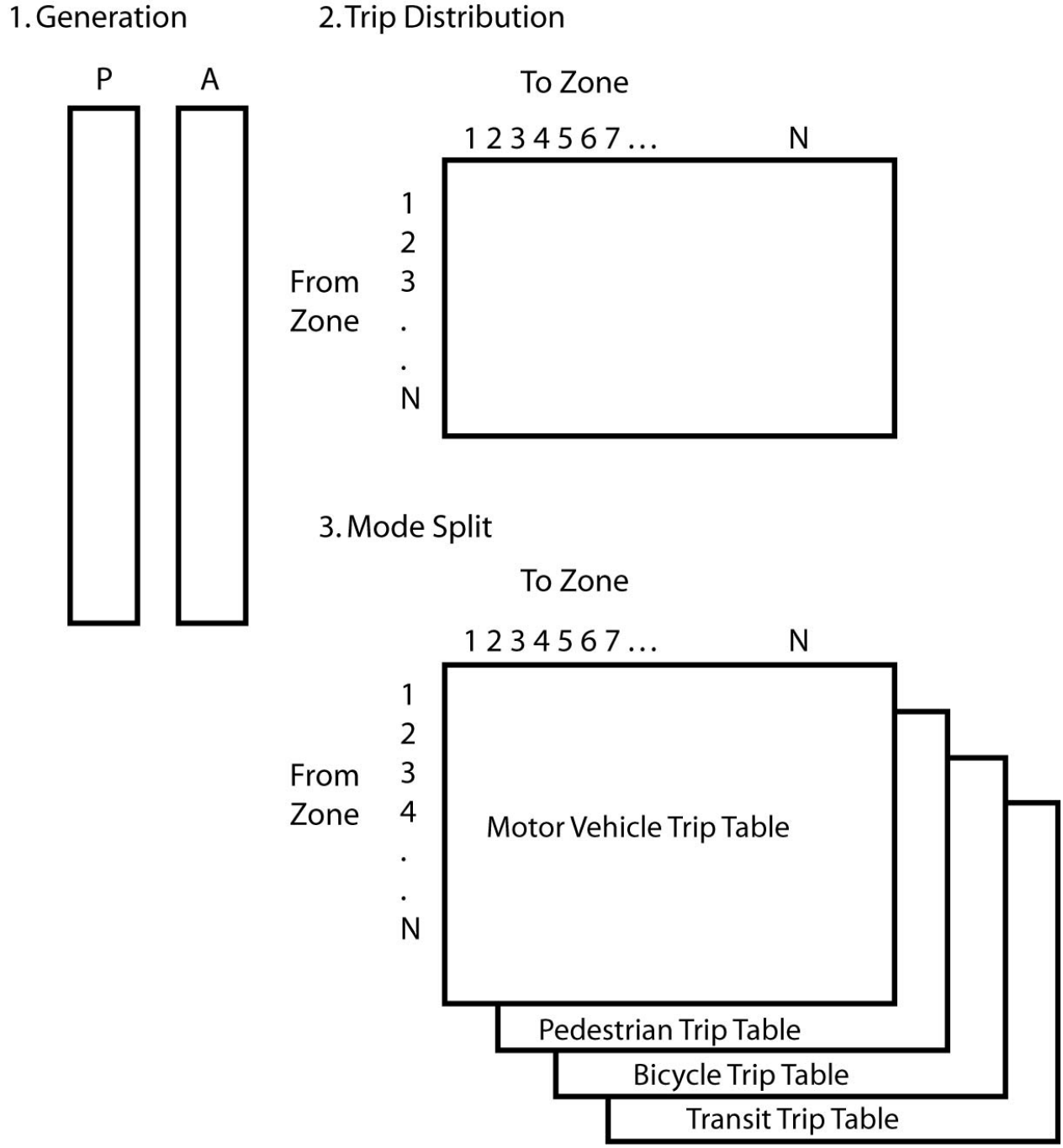

Figure 2: Complexity of Models Representation

In the figure above, n=number of zones; p=production; a=attractions (for each zone). These numbers are distributed from zone "1" to all other zones, of which in the BCDCOG area there are 1,306. Then they are further split by modes.

Each TAZ includes employment, dwelling units, and other indicators of activity stated with three significant figures of statistical accuracy. Thus, no greater accuracy can emerge from the

sequence of calculations described and depicted above. But, the DEIS continuously reports traffic assignment results with five and six significant figures, thereby portraying a false sense of accuracy for results from these long-range models.

A solution to this is to analyze the data manually, in cases where finer-grained calculations are needed. This approach was recently applied to a project in the region. In preparing the Update to Maybank Highway Widening Transportation Analysis, HPE applied manual trip generations for the pitchfork and Synchro™ analysis, balanced the capacity, and obtained accurate results.

2) The Rifle Shot

Another misuse of COG travel models during the DEIS includes over reliance on the relative accuracy of their travel forecasts over the 25 year period. All students of probability and statistics understand that longer periods of forecast always yield decreasing levels of reliability and accuracy. As noted above, since the land use input values for traffic modeling are usually entered with only three significant figures, it would be statistically impossible to achieve six significant figures as one forecasts over a 25 year period.

The following chart illustrates this point. The VMT model results are plotted by facility type (freeway, arterial and collector) for the No-build Alternative, Alternative G and NWTW (Alternative 19). The bars indicate the total number of vehicle miles traveled on freeways, arterials and collectors for each analyzed alternative. Note how similar these bars appear.

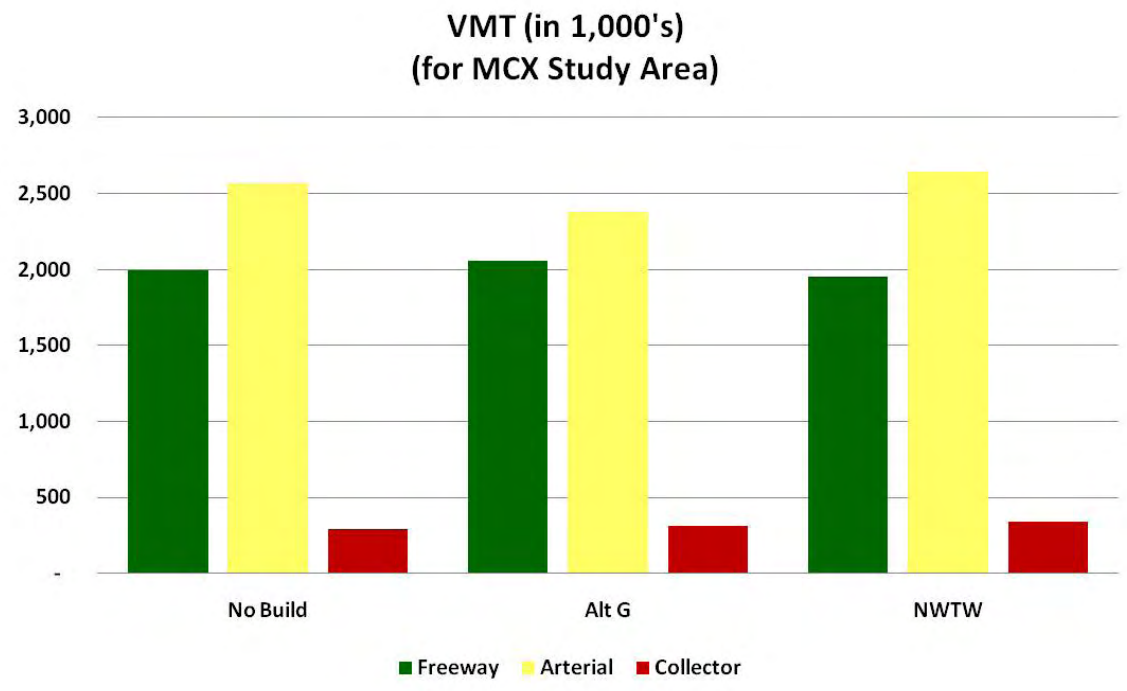

Figure 3: Significant Figures Fallacy

The pseudo-accuracy in divining the difference, for a 25 year forecast, between the performance of each alternative in the DEIS certainly lacks technical credibility. The relative difference between measures of effectiveness for any given alternative was reported in the

range of between 1% and 5% change. Estimates of vehicle miles traveled for the final A through G alternatives, for example, vary by a range of 0.4% to 3.3%. For experienced travel modelers, this difference can be characterized as “within the noise of the model” or, a non-significant difference.

The decreasing accuracy of travel estimates forecast over long time periods is thoroughly discussed by Dr. Ed Mierzejewski, P.E., Director of the Center for Urban Transportation Research at the University of South Florida, in his paper, "The Long Range Transportation Planning Process: Complex Answers to the Wrong Questions,” (1996). Using an analogy of target practice in marksmanship, he describes twenty-year travel forecasts, not as a rifle shot which pierces the precise point on distant targets, rather more like a shotgun blast where projectiles cover a broad target range.

Mierzejewski adds that the following are the most significant problems with current transportation planning practice that lead to poor or ineffective decision-making:

1. The inability to predict the future. Uncertainty exists in future demand, technology, costs, resource availability and values. Imponderable and unpredictable events will shape the future in ways we cannot hope to anticipate.
2. Current travel demand models are limited in their ability to replicate the present, much less forecast the future.
3. Even if travel demand models were perfect, uncertainties in the input variables are enormous and, to a large extent, unpredictable.
4. Social and political bias is a strong contributor to errors in anticipating future events and to the willingness to deal with uncertainty.

In summary, regarding the reported accuracy of all measures of effectiveness for the DEIS alternatives, it is our opinion that single value measures have shown reported differences that are well within the “noise of the model.” Based on accepted tolerances for travel model validation, the final travel model results display an accuracy range of plus or minus 10% on any given facility.

To get outside the noise of the model in summarizing the performance of each DEIS alternative, the agencies should have directly discussed the year 2035 daily traffic loadings at critical points in the network. Daily traffic loadings should be reported with three significant figures such as 42,500 instead of 42,531 trips per day. This would have disclosed NWTW’s relative benefits and would also have clearly shown that the Recommended Alternative G has 2035 daily vehicle loadings of only 17,000 vehicles on the northern Stono River bridge and 7,000 on the southern bridge. These levels of traffic are very low and would not even support bond sales for a toll supported funding option. In other words, this is a non-cost effective solution.

III. Model Assignment Traffic Results

During this review, HPE requested the results of the SCDOT’s regional modeling for all reasonable alternatives, as they were not included in the published DEIS. HPE’s analysis of this information was rather surprising. The two new bridges underperform after construction of Alternative G (see **Figure 4**). Even under the skewed, single-land-use analysis, the new bridges underperform, and there is very little difference between build and no build alternatives.

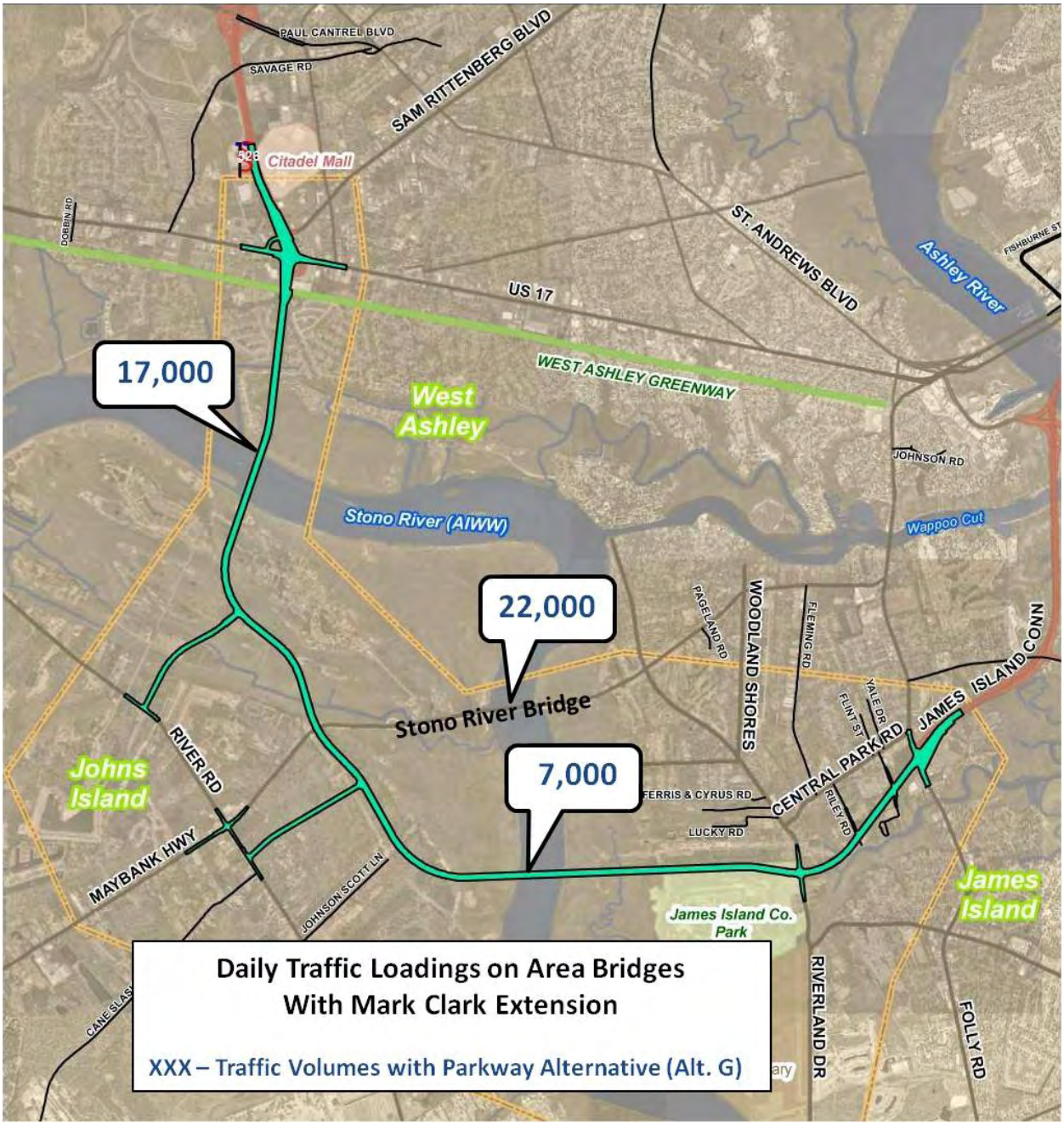

Figure 4: Daily Traffic Loadings on Area Bridges

The results shown in the above figure are summarized in the following **Table 2**, indicating very little difference between the built alternative and when compared to the No-Build.

Daily Traffic Loadings on Bridges (in thousands)		
	G – Parkway	No-Build
New North I-526 Bridge	17	-
Stono Bridge	22	43
New South I-526 Bridge	7	-
Total	46	43
No-Build Delta	3	-

Table 2: Daily Traffic Loadings on Bridges

One way to summarize these findings is to consider the possibility of building Alternative G as a toll facility. It would never be bonded as a toll facility because it is clear, based on the minimal traffic volumes served, that it would not generate enough trips to repay the bonds and would not be viable. This is not to say there will not be an increase in traffic in the region as a result of the MCE extension. In fact, there will be substantial induced travel demand throughout the region. The COG model, as demonstrated in the Table above, simply indicates that the new traffic will not utilize the new extension, pushing the new traffic elsewhere.

A major reason for these results and minimal traffic served, is that the MCE extension, including all of the reasonable alternatives, has been proposed as a circumferential highway, when the region truly needs radial service (see **Figure 5**).

Figure 5: Circumferential vs. Radial Alignments

The figure above indicates the main movement within the region preferring to access areas along Savannah Highway, Folly Road, Maybank Highway and the peninsular. The MCE extension and Alternative G, specifically, circumnavigate these areas; forcing most trips to only utilize the extension for a brief period of time before exiting and impacting the area's local network of streets. Not only are the overall differences in level of effectiveness for Alternative G and No-build minimal, one must wonder whether the DOT failed to understand the flaw in the circumferential design of the MCE extension. Drawing a conclusion about a preferred or recommended alternative, then, appears arbitrary in nature, with little more than slight changes in the measures of effectiveness as basis.

In sum, the NWTW alternative modeling and analysis in the DEIS was flawed in the following ways:

First, the regional-scale demand model was used in the first round of analysis, and this model does not allow the fine grained analysis necessary to accurately represent the network of streets. Consequently, the model did not accurately reflect the ability of these streets to provide additional capacity for regional through trips. This resulted in an inaccurate assessment of the traffic delay estimate, resulting in the elimination of NWTW in the first cut of analysis.

Second, the DEIS did not account for the compact urban development pattern proposed in the NWTW and its impact on land uses and subsequent traffic generation and attraction.

Third, to the extent that the DEIS regional model DID include any of the NWTW network, it did not include all the NWTW thoroughfare network, due to the erroneous conclusion that only "public" streets should be modeled. In fact, the type of local public and private streets included in the NWTW proposal are always present in regional model analyses. They are present as assumed centroid streets within the model, connecting to the major thoroughfares that are normally evaluated in this type of model. For example, these may be the private and public cul de sac streets that connect the homes in the regional model to the regional road network. A valid evaluation of the NWTW would have included all streets, similar to the regional model methodology.

Lastly, in portraying the results of this flawed analysis in the DEIS, the agencies have overstated the benefits to be derived from the recommended preferred alternative when the agencies own results show that the differences between the recommended preferred alternative, the no-build, and the NWTW are so slight that they cannot be accurately measured by the modeling techniques relied on by the agencies.

IV. Safety Measure

Common planning practice recognizes that it is difficult to predict a thoroughfare's future accident rate. The DEIS states on page 3-38, "…future crashes cannot be predicted…" Therefore, SCDOT should be careful not to attribute safety and improved accident rates to the wrong measure of effectiveness.

Measurement of the "ability to increase safety on existing roads" in the DEIS was tied to coarse, regional characteristics inappropriate for the scale of NWTW or any other alternative. To evaluate improvements in safety, the study team compared V/C ratios for thoroughfare

segments over the range of alternatives and concluded that as volume to capacity ratios improve, so would safety improve.

Departments maintaining safety statistics rely heavily on crashes per 100 million vehicle miles traveled as a major indicator. Thus, if vehicle miles traveled is reduced then safety increases.

Following is the list of roads identified in the DEIS as having a fatality rate (per 100 mill VMT) in excess of the state average, and their corresponding LOS and V/C:

	LOS	V/C
Camp Road	B	0.44
Folly Road	C	.53-.67
I-26	D-F	.75-1.09
James Island Connector	D-F	0.86
Lockwood Drive	C-D	.64-.83
Main Road	C	0.62
Maybank Highway	D-E	.63-.99
River Road	A	.08-.23

Table 3: Roads with High Fatality Rates and Corresponding LOS and V/C

With the exception of a short stretch of I-26, none of these roads exhibit severe congestion – only one portion of Maybank has LOS E. Therefore, the assertion that the V/C is representative of safety is completely unsupported by the data in the DEIS – these roads have a wide range of V/C, with no apparent relationship or correlation to the fatality rate per 100 mil VMT. The conclusion that any alternative studied improves safety of the regional transportation network is not supported at all by the DEIS.

V. Public Transit Consideration

The DEIS does not adequately evaluate transit as an option to the Mark Clark Expressway because it assumes land uses in 2035 will be the same, in terms of density and intensity as they were in 2009. This is not consistent with any of the most recent land use plans for these areas, all of which call for increasing densities, urban/rural village development, and similar approaches to curb sprawl and create walkable, sustainable, human-scale places in the future. In addition, the COG models themselves project increased traffic by 2035, which results in part from increasing land use intensity. If the land use assumptions made for transit (i.e., no change through 2035) were made for the regional demand model, then one would expect very little growth in vehicle traffic either. This appears to be a double standard applied to transit.

The DEIS also does not develop any expanded transit option for evaluation. The analysis simply assumes that current CARTA transit services will be continued. In fact, were transit to be seriously considered as an option, additional transit frequencies would typically be provided. The analysis did not include any increases in transit frequency, even though it states that CARTA experienced a 9% ridership increase in one year on routes that increased frequency. This type of ridership increase was not assumed for the transit analysis, however, as the analysis did not assume any increase in transit frequency.

The analysis described, in very general terms, the provision of rail transit, but did not provide any estimate of projected travel on such a system. The analysis simply says that existing land uses are too sparse to support rail transit, again ignoring the existing plans for greater density and walkability in the study area.

The analysis points out specifically that the need and purpose of the project is to "increase the capacity, and improve the safety of the regional transportation system." Transit is, far and away, the best way to do both – a single transit vehicle, whether a bus or a rail car, provides an order of magnitude increase in capacity over an automobile, and taking transit is statistically much safer than driving or riding in an automobile. The table below compares fatalities per 100 million passenger miles between transit and automobiles, using a vehicle occupancy rate of 1.5/automobiles. Using these data from the Bureau of Transportation Statistics, bus transit is 9 times safer than riding in a car, and light rail is 19 times safer.

Fatality Rates per 100 Million Passenger-Miles (1997)	
Motor Vehicles	0.93
Rail Rapid Transit	0.55
Commuter Rail	0.05
Bus	0.1
Light rail	0

Table 4: Fatality Rates per 100 Million Passenger-Miles by Vehicle Type
[Source: Bureau of Transportation Statistics/National Transportation Statistics 1999 and FTA/National Transit Statistics and Trends 1998; average motor vehicle occupancy rate of 1.5 calculated from 1998 FHWA data]

An appropriate analysis would be to compare, on a cost per trip basis, the combined effects of planned transit-supportive land use and several transit technologies including rail and bus rapid transit. The cost of operating these services could be compared to the cost of the highway options on a total as well as per-trip basis. The DEIS analysis did not do this.

VI. Conclusions

HPE's technical review of the Mark Clark Expressway Extension DEIS discovered a number of flaws, which resulted in an inaccurate assessment of the recommended preferred alternative and an unrealistic evaluation of Glatting Jackson's proposed New Way To Work (NWTW) Alternative. Not only were some of the methods employed in the DEIS analysis biased towards favoring a freeway-style alternative, proving incapable of accurately predicting the results of the fine-grained network alternative proposed as part of the NWTW, the DEIS also presented many of its findings in a misleading and unclear manner. Weaknesses in the modeling process, known to practitioners and statisticians, were not disclosed, leading to a misrepresentation of the results.

Ex. B

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 843-720-5270 | 43 BROAD STREET, SUITE 300 CHARLESTON, SC 29401-3051 | Facsimile 843-720-5240

September 30, 2010

VIA E-MAIL AND U.S. MAIL

Ms. Elizabeth Williams
US Army Corps of Engineers, RD
69A Hagood Avenue
Charleston, SC 29403-5107
Elizabeth.G.Williams@usace.army.mil

Re: Mark Clark Expressway, Charleston County, SC
P/N # SAC 2010-00642-DIJ

Dear Ms. Williams:

On July 28, 2010, the Charleston District of the U.S. Army Corps of Engineers (the "Corps" or "Charleston District") issued Joint Public Notice # SAC 2010-00642-DIJ (the "JPN") that relates to the submittal of an application by the South Carolina Department of Transportation ("SCDOT") for a permit under Section 404 of the Clean Water Act, 33 U.S.C. § 1344 (2010) ("CWA" or the "Act"), and Section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 403 (2010) ("RHA"), "to construct a parkway in wetlands adjacent to and crossing over the Stono River at a location extending from the current terminus of the Mark Clark Expressway (I-526) at U.S. 17 in the West Ashley area of Charleston, continuing onto Johns Island, crossing over onto James Island and ending at the existing intersection of S.C. 171 (Folly Road) and S.C. Route 30 (James Island Connector) in Charleston County, South Carolina." JPN at 1.

On behalf of the South Carolina Coastal Conservation League ("League"), the Southern Environmental Law Center ("SELC") submits this comment letter to express our concerns about the project. As described in more detail below, the project as proposed by SCDOT raises serious concerns regarding compliance with the CWA, the National Environmental Policy Act, 42 U.S.C. § 4332 (2010) ("NEPA"), and Section 4(f) of the Federal Highway Transportation Act, among others. In particular, SCDOT has failed to carry its burden by clearly demonstrating that no practicable alternatives exist that do not require a discharge into wetlands or other special aquatic sites pursuant to the Section 404(b)(1) Guidelines (the "Guidelines") under the CWA. Moreover, given its meager transportation benefits and high cost, the proposed project falls well short of satisfying the Corps' public interest review test. *See* 33 C.F.R. § 320.4(a) (2010). For these and other reasons, we respectfully request that the Corps deny the permit application for this project.[1]

[1] This letter incorporates by reference our previous comment letters on this project, which can be found in Appendix I of the draft environmental impact statement ("DEIS"); our comments submitted to the joint lead agencies for this project on the DEIS (attached hereto as Ex. A); and the *Report on the Mark Clark Expressway Extension Draft*

Background

The origins of this proposed project date back to the 1960s. In the mid-1960s, a transportation study was undertaken for the Charleston region by a number of local and federal agencies. FEIS, No. FHWA-SC-EIS-79-01-F at p. 8 (1981). The study culminated in 1968 with the development of a "Recommended Transportation Plan," which included what would later come to be known as the Mark Clark Expressway. *Id.* An environmental impact statement ("EIS") was finalized in 1972 for the portion of the project beginning at Virginia Avenue in North Charleston and extending westerly across I-26 and the Ashley River. *Id.* In 1981, an EIS was completed for the segment of the highway from Virginia Avenue in North Charleston easterly across the Cooper and Wando Rivers to a terminus with U.S. 17 in Mount Pleasant. *Id.* In 1995, a draft supplemental environmental impact statement ("SEIS") was submitted for the same portion of proposed highway that is at issue now. The draft SEIS recommended the same alignment that had been chosen in the 1972 final environmental impact statement ("FEIS") with a few adjustments due to the presence of the James Island County Park, which opened in 1990. This alignment did not move forward at the time due to a lack of funding. Draft Agency Coordination and Public Involvement Plan at p. 2 (Apr. 8, 2008).

After Charleston County voted in 2007 to once again pursue this project, the joint lead agencies – SCDOT, the Federal Highway Administration ("FHWA"), and Charleston County – determined that a new EIS was necessary to address the environmental impacts of the proposed project given the changes within the project area that had taken place since the project was last studied in 1995. *See* Mark Clark Expressway, Draft Environmental Impact Statement and Section 4(f) Evaluation at ES-2. In order to "streamline reviews," FHWA and the Corps "agreed to merge the NEPA and 404 process." DEIS at 1-21. As a result of this merger agreement, the agencies have sought to prepare the DEIS to satisfy FHWA's regulations and procedures in addition to the Corps' permitting requirements under Section 404 of the CWA and Section 10 of the RHA.

According to the JPN, the proposed construction of the recommended preferred alternative (Alternative G) consists of a four-lane parkway facility with low speeds (*i.e.*, 35 to 45 mph). JPN at 2. The expansion would begin at the present terminus for I-526 at the intersection of S.C. 7 and U.S. 17 (Savannah Highway), would cross over S.C. 700 (Maybank Highway), and would then connect via two connector roads to River Road on Johns Island. DEIS at 6-18. On James Island, Alternative G would continue within the northern property line of the James Island County Park and would provide connection to the local road network at Riverland Drive, Riley Road, and Up on the Hill Road before terminating at the intersection of S.C. 171 (Folly Road), and S.C. 30 (James Island Expressway). DEIS at 6-18. Alternative G would cross the Stono River at two locations and, according to the Corps, would involve permanently filling approximately 15.93 acres of wetlands (2.98 acres of salt marsh / critical area wetlands 12.46

Environmental Impact Statement prepared by Hall Planning & Engineering, Inc. ("HPE Report") (attached hereto as Ex. B).

acres of freshwater wetlands, 0.14 acre of tidal creeks, and 0.35 acre of freshwater ponds) for the construction of the new roadway, bridges, and interchanges and existing roadway improvements. In addition, the Corps estimates that temporary impacts to jurisdictional waters, including tidal creeks, tidal salt marsh wetlands and freshwater forested wetlands, would result in an additional 20.83 acres of fill and that another 30.73 acres of tidal wetlands and creeks would be impacted due to shading. JPN at 3.

The New Way to Work Alternative

Due to the acknowledged congestion of area roads and the high cost and significant environmental impacts associated with the expansion of I-526, the League retained a leading, nationally recognized transportation consulting and design firm, Glatting Jackson Kercher Anglin ("Glatting Jackson"), to devise a different alternative than the extension of I-526 with the goal of meeting the same project purpose of increasing the capacity of the regional transportation system, improving safety, and enhancing mobility to and from the West Ashley, Johns Island, and James Island areas of Charleston. This alternative (the "New Way to Work" or "NWTW") is a "functional alternative," meaning it is an option other than constructing another highway or parkway corridor within which to expand I-526. As opposed to constructing 7.9 new miles of interstate highway to connect Savannah Highway and the James Island Expressway, the League proposed a far cheaper and more effective means of addressing traffic problems. Pursuant to this alternative, the existing local road network would be redeveloped at key locations to provide increased connectivity of local surface streets, giving drivers more choices for purposes of avoiding congestion on major thoroughfares. By giving drivers additional options for moving through the area, local traffic can be reduced on overburdened arterial roads and highways, which will enhance the mobility of vehicles needing to travel through these corridors.

In order to ensure a fair evaluation of the NWTW, the League, its consultants, and its attorneys met with the joint lead agencies and their consultants on numerous occasions, supplied them with specific design information for the NWTW, and even offered to pay for Hall Planning & Engineering, Inc. ("HPE") staff, a consulting firm that has expertise in the type of modeling necessary to evaluate a network solution (such as the NWTW) to meet with the project team and its consultants for purposes of further developing and refining the appropriate methodology and level of modeling for this project. Despite these efforts, the joint lead agencies declined to apply appropriate modeling techniques and eliminated the NWTW (identified as Alternative 19 and 19R in the DEIS) at the earliest possible stage of the analysis.

Overview of Regulatory Requirements

SCDOT has applied for a permit pursuant to Section 404 of the CWA and Section 10 of the RHA. Permits under Section 404 of the CWA may be issued only for the "least damaging practicable alternative" that will meet the basic purpose and need for the project. Also noteworthy, the U.S. Environmental Protection Agency ("EPA") may issue a veto of a Section 404 permit proposal, even one claimed to be the "least damaging," when its adverse environment impacts are unacceptably high. 33 U.S.C. § 1344(c). The Corps' criteria for evaluating a permit application under Section 10 of the RHA are set forth at 33 C.F.R. § 320.4. Pursuant to these regulations, the "[d]ecision whether to issue a permit will be based on an evaluation of the

probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest." *See* 33 C.F.R. § 320.4(a) (listing relevant factors to be considered).

Pursuant to NEPA, the EIS must explore a reasonable range of potential alternatives to meet the primary objective of the I-526 project. In fact, the primary purpose of the EIS is to carefully explore a reasonable range of location and functional alternatives that meet some or all of the primary project purposes, including a "no-action" alternative and compare their overall relative direct and indirect environmental impacts. 40 C.F.R. §§ 1502.14(d), 1508.25(b). Harm to the environment, and the relative degree to which each alternative will meet the project purpose over time, including foreseeable induced development as a result of this major highway construction project, must be considered as part of this study. 23 C.F.R. §§ 771.105(b), 771.123(c).

In addition to natural resource impacts, it is important that the EIS carefully consider the short and long term impacts on the human environment in the project area. The EIS must consider the foreseeable development impacts of the proposed project on impacted communities, such as Johns Island and James Island. A recent study forecasts that "Johns Island will experience significant increases in the number of households and residential-serving uses in the years ahead" due in part to "improved interstate access" and that "Johns Island will see 20 to 40 percent more population growth than predicted" by local officials. Mark Clark Community Impact Assessment, EDAW AECOM at pp. 2, 15 (hereinafter referred to as the "EDAW Study"). The EIS must carefully evaluate this type of growth, which will be induced by the proposal, and its accompanying impacts.[2]

Closely related to Section 404 of the CWA is the Section 401 certification process. Pursuant to this process, the South Carolina Department of Health and Environmental Control ("DHEC") must certify that the project will not harm water quality, taking into account feasible alternatives, wildlife habitat in the area, and other factors. A Section 401 water quality certification is a prerequisite to the issuance of a Section 404 permit, and may be denied when the project will have unacceptably high adverse impacts on aquatic resources. S.C. Code Regs. 61-101(F)(5); *see also* S.C. Code Regs. 61-101(F)(3)(c).[3] SCDOT must also obtain a permit pursuant to the South Carolina Coastal Zone Management Act, S.C. Code Ann. § 48-39-10, *et seq.* (2009).

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[2] Additional comments regarding NEPA can be found in our letter to the joint lead agencies regarding the DEIS (attached hereto as Ex. A).

[3] Pursuant to an amended public notice clarification issued on September 17, 2010, comments to the Office of Ocean and Coastal Resource Management ("OCRM") are not due until October 17, 2010. We will be submitting our comments on this project with respect to Section 401 of the CWA, the South Carolina Coastal Zone Management Act, and other state issues to OCRM by that date. It is worth noting here, however, that it will be particularly difficult for SCDOT to demonstrate that the short- and long-term impacts of the project will not result in unacceptable adverse impacts because the proposal threatens to exacerbate already present water quality problems in the Stono River, which currently fails to meet water quality standards for dissolved oxygen and fecal coliform. *See* South Carolina's 303(d) List (2010), available at http://www.scdhec.net/environment/water/tmdl/ (last visited Sept. 29, 2010). It can be expected that the proposed project will exacerbate already present water quality problems by generating polluted runoff from the new roadways and bridges as well the development that would be induced by this parkway.

Other important laws relevant to this project that must be taken into account for purposes of this project include Section 4(f) of the Federal Highway Transportation Act and the Endangered Species Act, 16 U.S.C. § 1531, *et seq.* Section 4(f) is particularly relevant in this case because the recommended preferred alternative – Alternative G – bisects the northern boundary of the James Island County Park in addition to impacting the West Ashley Greenway. Pursuant to Section 4(f), the consideration of any such route would require a showing that there is no "prudent and feasible" alternative means of addressing the identified transportation need. Thus, crossing any protected property, such as James Island County Park and the West Ashley Greenway, with a highway would be illegal unless a compelling case can be made demonstrating that there is no other option to alleviate traffic congestion in the targeted areas.[4] Careful study and consultation with the U.S. Fish and Wildlife Service ("FWS") under the ESA is also required in connection with this project given the presence of an important rookery for the federally endangered wood stork within approximately 0.8 miles of the recommended preferred alternative and within the actual path of two of the other reasonable alternatives.

As described in greater detail below, the process that has led to the DEIS has been biased and skewed heavily in favor of completing the Mark Clark Expressway project and against other non-highway or non-parkway alternatives, such as the NWTW. Not only have the modeling tools been seriously flawed, but the agencies have developed a contrived, tiered system for reviewing alternatives that made the elimination of the NWTW inevitable. Given the arbitrary manner in which the NWTW was jettisoned in the DEIS, the Corps will be unable to rely on the DEIS to satisfy its responsibilities under NEPA. Moreover, SCDOT has failed to satisfy its burden under the Section 404(b)(1) Guidelines in a number of ways, including its inability to demonstrate that Alternative G is the least damaging practicable alternative. As such, SCDOT's application for a Section 404 permit must be denied.

Legal Issues

I. SCDOT's Application for a Corps Permit Fails to Satisfy the CWA and the 404(b)(1) Guidelines and Must Therefore Be Denied

Section 404(a) of the CWA, 33 U.S.C. § 1344(a), authorizes the Secretary of the Army, acting through the Corps, to issue permits for the discharge of dredged or fill materials into wetlands or other waters.[5] Section 404(b)(1) of the CWA, 33 U.S.C. § 1344(b)(1), directs the EPA to issue the Guidelines that define the circumstances under which dredged or fill material may be discharged into wetlands or other waters. Importantly, the Guidelines provide that the Corps shall not grant a Section 404 permit "if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." 40 C.F.R. §

[4] Additional comments regarding Section 4(f) of the Federal Highway Transportation Act can be found in our letter to the joint lead agencies regarding the DEIS (attached hereto as Ex. A).

[5] Section 301 of the CWA, 33 U.S.C. § 1311, prohibits the discharge of any "pollutant," including dredged and fill material, into "waters of the United States" without a CWA permit.

230.10(a). An alternative to discharge to a wetland "is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purpose." 40 C.F.R. § 230.10(a)(2). Where a discharge is proposed for a wetland or other special aquatic site, all practicable alternatives to the proposed discharge that do not involve a discharge to the wetland "are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise." 40 C.F.R. § 230.10(a)(3). In addition, if the activity associated with a discharge to a wetland does not require access or proximity to or siting in a wetland (*i.e.*, is not "water dependent"), practicable alternatives that do not involve wetland sites "are presumed to be available, unless clearly demonstrated otherwise." 40 C.F.R. § 230.10(a)(3).[6]

To implement the Guidelines, the Corps must first require a correct statement of a project's "basic purpose." *See* 40 C.F.R. § 230.10(a)(3). *See also* 33 C.F.R. Part 325, App. B(9)(b)(4) (explaining Corps' definition of project purpose and saying "[i]f the scope of analysis for the NEPA document . . . covers only the proposed specific activity requiring a Department of the Army permit, then the underlying purpose and need for that specific activity should be stated"). Second, after the Corps defines the basic purpose of the project, it must determine whether that basic purpose is "water dependent." *See* 40 C.F.R. § 230.10(a)(3). An activity is "water dependent" if it requires access or proximity within a wetland to fulfill its basic purpose. *Id.*

A. The Corps' Purpose and Need Statement Is Flawed

In this case, the Corps definition of the basic purpose of the project violates its own regulations. In light of the manner in which the Guidelines are written, a correct statement of the project's "basic purpose" affects whether the presumption of practicable alternatives applies, and thus the extent of the applicant's burden. *See Nat'l Wildlife Federation v. Whistler*, 27 F.3d 1341, 1345 (8th Cir. 1994) (determining project purpose is "central" to practicable alternatives analysis). The Corps has discretion to characterize the project's basic purpose in the first instance, including whether to accept or reject the applicant's characterization of that purpose. In so doing, the Corps must take the applicant's goals and purposes into account. *Louisiana Wildlife Federation v. York*, 761 F.2d 1044, 1048 (5th Cir. 1985). But "an applicant cannot define a project in order to preclude the existence of any alternative sites and thus make what is practicable appear impracticable." *Sylvester v. U.S. Army Corps of Engineers*, 882 F.2d 407, 409 (9th Cir. 1989). If an applicant did so and the Corps adopted the applicant's characterization of the project's purpose, the Corps would have abused its discretion.[7]

According to the DEIS, the Corps has defined the overall project purpose as follows:

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[6] The Guidelines "couple a general presumption against all discharges into aquatic ecosystems with a specific presumption that practicable alternatives to the fill of wetlands exist." *Hough v. Marsh*, 557 F.Supp. 74, 83 D. Mass. 1982). "[A]n applicant . . . must rebut both of these presumptions in order to obtain a permit." *Bersani v. Robichaud*, 850 F.2d 36, 39 (2d Cir. 1998).

[7] NEPA also requires that an EIS contain a statement of purpose and need for the proposed action. CEQ's NEPA regulations provide that "the statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including their proposed action." 40 C.F.R. § 1502.13 (emphasis added).

> the overall project purpose is "to improve the current transportation system to and from West Ashley, Johns Island and James Island area, thereby completing the State transportation link between the existing terminus of the James Island Connector (SC Route 30) at Folly Road (SC Route 171) and the existing terminus of Interstate 526 at U.S. Highway 17, which would provide connectivity within these areas."

DEIS at 2-27. *See also* letter from Lieutenant Colonel J. Richard Jordan, III of the Charleston District to Robert Lee of FHWA dated April 16, 2009 at DEIS, App'x G (defining Corps statement of project purpose).

The Corps' statement of project purpose is far too narrow. Because an agency need only consider alternatives that are reasonable in light of the project's stated purpose, *Alliance for Legal Action v. Fed. Aviation Admin.*, 69 Fed. Appx. 617, 622 (4th Cir. 2003), the statement of purpose and need "dictates the range of 'reasonable' alternatives and an agency cannot define its objectives in unreasonably narrow terms." *N.C. Alliance for Transp. Reform, Inc. v. United States Dep't of Transp.*, 151 F. Supp. 2d 661, 686 (M.D.N.C. 2001) (quoting *Carmel-by-the-Sea v. United States Dep't of Transp.*, 123 F.3d 1142, 1155 (9thCir. 1997)).

It is impermissible for an EIS to articulate the project purpose in a way that artificially restricts the consideration of alternatives. *See Simmons v. United States Army Corps of Engineers*, 120 F. 3d 664, 666 (7th Cir. 1997) (saying "[o]ne obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing 'reasonable alternatives' out of consideration (and even out of existence)."); *EDF v. Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974) (explaining NEPA requires a "thorough consideration of all appropriate methods of accomplishing the 'aim of the action'").[8] By stating that the purpose of the project is to complete the link between the James Island Connector and the existing terminus of I-526 at Savannah Highway, the Corps' statement of overall project purpose artificially constrains the consideration of a reasonable range of alternatives and strays from the project's core purpose, which is to address congestion in a defined geographic area. Such a narrow statement of project purpose has the effect of eliminating the consideration of non-highway alternatives that address congestion, safety, and mobility in a specific part of the greater Charleston region, which is the actual central underlying purpose of this project.

B. The Purpose of the Mark Clark Expressway Extension Is Not Water Dependent

A project is not water dependent if it "does not require access or proximity to or siting in a wetland." 40 C.F.R. § 230.10(a)(3). In order to determine whether a project is water dependent, the basic purpose of the project must be known. As one recent court explained:

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[8] In *Town of Matthews v. U.S. Dept. of Transp.*, 527 F.Supp. 1055 (W.D.N.C. 1981), the U.S. Department of Transportation failed to give detailed consideration to a bypass alternative on grounds that the sole purpose of the project was the repair of an existing road and "only alternative methods of repair of that road are 'within the scope' of the project, and need be considered in the EIS." *Id.* at 1057. The court rejected the agency's narrow definition of project purpose and need, determining that the "proposed project has the dual purpose of repairing an old road, and of upgrading it to serve the through traffic . . . in the foreseeable future." *Id.*

> the purpose of a residential development is to provide housing for people. Houses do not have to be located in a special aquatic site to fulfill the basic purpose of the project, i.e., providing shelter. Therefore, a residential development is not water dependent.... Examples of water dependent projects include, but are not limited to, dams, marinas, mooring facilities, and docks. The basic purpose of these projects is to provide access to the water.

Sierra Club v. Van Antwerp, 2009 U.S. Dist. LEXIS 127186 at *16 (S.D. Fla. Jan. 30, 2009).

As the NWTW makes clear, the basic purpose of the Mark Clark Expressway extension project is not water dependent. Increasing the capacity of the regional transportation system, improving safety, and enhancing mobility to and from the West Ashley, Johns Island and James Island can be accomplished by techniques and strategies that do not require access or proximity to or siting in a wetland. In fact, the overall project purpose in this case can be met by the approach embodied in the NWTW, including re-developing local surface streets and giving drivers more choices, thereby reducing traffic on overburdened arterial roads and highways. Such a strategy does not require the filling of wetlands or other waters.

C. SCDOT's Section 404 Application Fails to Clearly Demonstrate that No Practicable Alternatives Exist

An applicant for a Section 404 permit for a non-water dependent activity, like this project, must "clearly demonstrate" that no practicable alternatives exist that do not require a discharge into wetlands or other special aquatic sites. 40 C.F.R. § 230.10(a)(3). *See Shoreline Assocs. v. Marsh*, 555 F. Supp. 169 (D. Md. 1983), *aff'd*, 725 F.2d 677 (4th Cir. 1984). "[T]he applicant and the [Corps] are obligated to determine the feasibility of the least environmentally damaging alternatives that serve the basic project purpose. If such an alternative exists . . . the CWA compels that the alternative be considered and selected unless proven impracticable." *Utahns for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1188-1189 (10th Cir. 2002). Under the CWA, "the test is whether the alternative with less wetlands impact is 'impracticable,' and the burden is on the Applicant . . . with independent verification by the [Corps], to provide detailed, clear and convincing information *proving* impracticability." *Id.* at 1186 (emphasis in original).

1. The NWTW Is the Least Environmentally Damaging Alternative

A legitimate evaluation of the NWTW would have shown that the NWTW is the least damaging practicable alternative that serves the basic project purpose of enhancing regional mobility in the project area.

As an initial matter, based on the limited information made available in the DEIS, we believe the extent of wetland impacts from a NWTW has been overstated. In describing its treatment of the NWTW, the DEIS explains that the various right of way widths for the streets that comprised the NWTW alternative did not meet SCDOT design standards because the proposed streets were too narrow. Instead of evaluating the streets as they were proposed by

Glatting Jackson, the SCDOT amended the NWTW by widening each of the streets to a standard SCDOT width of 65 feet. *See* Preliminary Alternatives Analysis Technical Memorandum, Part I: Addendum B at DEIS at App'x K. We suspect that the decision to unilaterally increase the footprint of these streets has resulted in higher estimated filling of wetlands. Given the lack of information presented in the DEIS, however, it is not possible to test our theory for why the DEIS has estimated 10.1 acres of fill in connection with the NWTW. We have submitted a request to the Corps under the Freedom of Information Act (and to SCDOT under the state Freedom of Information Act) for all underlying information that would allow us to understand how the agencies arrived at this estimate. Once this information is made available, we will evaluate it and supplement these comments, if necessary.

Second, even if the agencies were correct in estimating that the NWTW would impact 10.1 acres of wetlands, the NWTW still outperforms the reasonable alternatives on this measure. In fact, each of the reasonable alternatives would impact more wetlands than the NWTW. *See* DEIS at 6-22 (showing that reasonable alternatives will require permanently filling between 15.85 and 29.39 acres of wetlands). Further, comparing the NWTW and the other alternatives based solely on the number of wetlands to be filled is made even more problematic by the admission in the DEIS that two categories of wetlands – estuarine and marine wetland and estuarine and marine deepwater – "were not included in the calculation of impacts because these types of wetlands were assumed to be bridged." DEIS at 3-40. Even though the highway alternatives may bridge over these types of wetlands, there will still be significant impacts from the bridges to these wetlands due to construction activities and shading.[9]

In fact, construction activities are estimated to result in the discharge of temporary fill to 20.83 acres of wetlands, and the bridges will shade approximately 30.73 acres of tidal wetlands. Like the temporary and permanent filling of salt marshes, shading can have a significant impact as well. New bridges can be expected to block sunlight and eliminate marsh grass because salt marsh plants are known to be very sensitive to reductions in light intensity. Bridges shade marsh plants, resulting in reduced photosynthesis, growth, and production. Persistent low light levels result in plant death. As a result of marsh loss due to shading, there will be a reduction in the amount of detritus production and export to the estuary with subsequent effects on members of the benthic invertebrate community, such as shellfish. These losses of one part of the food web can have a reverberating effect on the entire marshland community and estuary. Loss of marsh will result in reduced habitat and nursery opportunities for marsh organisms such as fish, crab, and shrimp, which serve as food for other marsh-dependent wildlife, such as wading birds. Accordingly, the loss of marshlands through shading ultimately results in reduced food for fish, shrimp, crabs, oysters, clams, mussels, birds, and other marsh-dependent animals throughout the marsh system and estuary. Had these impacts been taken into consideration, the DEIS' alternatives analysis would have shown that the NWTW has far less of an impact on wetlands than the reasonable range of alternatives.

Third, as discussed in greater detail below, the agencies made no effort as part of the alternatives analysis to compare the quality and function of the wetlands to be impacted by the

[9] It should also be noted that the highway alternatives (unlike the NWTW) will also degrade the already-impaired Stono River due to the discharge of stormwater from the bridges.

various alternatives. This omission also biases the analysis against the NWTW. To the extent the NWTW impacts wetlands, it is likely that it impacts freshwater wetlands, ponds, and perhaps roadside ditches. Although these waters certainly have important functions and services, they are likely somewhat degraded given their location on the landscape and therefore do not provide as many benefits and services as the salt marshes that will be impacted by the recommended preferred alternative and other highway alternatives. The failure to consider the relative difference between types and qualities of wetlands to be impacted by the various alternatives has further slanted the results of the analysis against NWTW.

For these reasons, the DEIS' alternatives analysis with respect to wetland impacts was clearly flawed, and a fair evaluation process would have shown even more clearly that the NWTW has a substantially smaller impact on wetlands than the reasonable range of alternatives.

2. SCDOT and Corps Failed to provide detailed, clear and convincing information proving impracticability of NWTW

SCDOT and the Corps were obligated to determine the feasibility of the least environmentally damaging alternative that serves the basic project purpose. Under the CWA, the burden is on the applicant with independent verification by the Corps to provide detailed, clear and convincing information proving impracticability. Here, neither SCDOT nor the Corps has met that burden. As we detail more fully in our comments on the DEIS, incorporated into this letter by reference, NWTW is a viable, perhaps even superior alternative whose benefits the agencies ignored based on flawed modeling and a contrived tiered process that distorted its benefits and made arbitrary distinctions based on minuscule differences.

As an initial matter, none of the alternatives considered were meaningfully different from one another in terms of their transportation benefits. Even using modeling heavily skewed in favor of a highway alternative, the agencies generated results showing the differences projected among the alternatives were well within the "noise of the model." HPE Report at 10-12. The agencies therefore narrowed their range of alternatives based on a contrived tiered process rather than genuine ability to meet the project purpose and need. This process highlighted infinitesimal distinctions and gave them dispositive weight in determining which alternatives were reasonable for purposes of inclusion in the DEIS. For example, the range of reasonable alternatives was treated as improving regional mobility on James Island because those alternatives shaved between 30 and 66 seconds off of a 21.7 minute commute, while other alternatives such as NWTW, which did not reduce the same travel time by 24 seconds or more, were screened from further consideration for failure to measure up to the other alternatives in this category. The DEIS acknowledges that NWTW and the highway alternatives screened through the "preliminary alternatives analysis" were eliminated from further analysis in the DEIS based on their performance relative to one another rather than their ability to satisfy the project purpose and need. NWTW for example, was eliminated from consideration in the DEIS because of "natural breaks" in data comparison and "because other alternatives provided more benefits . . . " DEIS, App'x K.

Second, the agencies' NEPA analysis of NWTW consisted of applying a predictive model that they understood to be incapable of accurately or reliably measuring its benefits, and

then giving the model's results dispositive weight rather than applying their professional judgment to assess whether the model's results reflected NWTW's likely performance on the ground. In a number of ways detailed in our NEPA comments, the modeling process was heavily skewed and relied on incorrect data inputs. As the expert report attached to our NEPA letter explains, "if the agencies had followed minimum industry standards and readily available techniques, the assessment of the NWTW would have been radically different and would have shown that the NWTW is equal to or superior to the other alternatives considered as part of this process in achieving the stated purpose of the project." HPE Report at 3.

Lastly, the agencies never factored any alternative's ability to improve safety on existing roads into their analysis, even though this was an important part of the project purpose and need. Based on statistics compiled through national data, strategies employed by NWTW have significant safety benefits. The design of the recommended preferred alternative, in contrast, may turn out to negatively impact the safety of road segments, which already have higher-than-average crash rates. NWTW appears the more viable option for meeting this aspect of the project purpose and need.

3. Alternative G Is Not a Practicable Alternative

Not only did SCDOT fail to provide detailed, clear and convincing information proving the impracticability of the NWTW, but SCDOT has actually selected a recommended alternative that appears to be prohibited by state law. South Carolina law provides that "[i]n every case of a proposed permanent improvement, construction, reconstruction, or alteration by the Department [of Transportation] of any highway or highway facility within a municipality, the municipality may review and approve the plans before the work is started." S.C. Code Ann. § 57-5-830 (2009). To implement this statutory provision, SCDOT has developed a procedure whereby the agency will request consent for highway projects from municipalities in the form of a municipal agreement.

With respect to this project, it is our understanding that SCDOT has not yet submitted a municipal agreement to the Town of James Island. Even if SCDOT does not plan to present the municipal agreement to the Town until after the EIS is finalized, it is worth noting now that the Town has already expressed its position on this project on two occasions. On April 7, 2009, the James Island Town Council voted unanimously to oppose any extension of I-526 that would be constructed through or over the town.[10] And again, on September 21, 2010, the James Island Town Council voted in opposition to the construction of the extension through the Town's jurisdiction.[11] Not only would Alternative G have to be constructed through the Town of James Island, but each of the other reasonable alternatives would also have to be built through the Town as well.

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[10] Edward C. Fennell, *James Island council opposes I-526 project* (Apr. 8, 2009), *available at* http://www.postandcourier.com/news/2009/apr/08/james_island_council_opposes_i_project77921/?print (last visited Sept. 29, 2010).

[11] Edward C. Fennell, *Clark may be focus of inquiry* (Sept. 22, 2010), *available at* http://www.postandcourier.com/news/2010/sep/22/clark-may-be-focus-of-inquiry/ (last visited Sept. 29, 2010).

An alternative is practicable under the CWA if it is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." Further, "[i]f it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered." 40 C.F.R. § 230.10(a)(2). *See generally* 46 Fed. Reg. 18026, 18027 (CEQ guidance on NEPA regulations saying "[i]n determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' . . . . Reasonable alternatives include those that are *practical or feasible* from the technical and economic standpoint and using common sense, rather than simply *desirable* from the standpoint of the applicant") (emphasis in original). In light of the Town of James Island's position regarding the extension of the highway, it does not make sense for the agencies to continue to expend resources to advance alternatives that may well be prohibited under state law and are therefore not available, reasonable, or feasible. Instead, the agencies should study those alternatives, like the NWTW, that are truly practicable.

D. The SCDOT and Corps have Failed to Determine the Impact that the Proposed Project Will Have on the Structure and Function of the Aquatic System

The SCDOT and Corps have failed to determine the impact that the proposed project will have on the structure and function of the aquatic system, and this error has undermined the alternatives analysis and the requirement to show that the project has avoided and minimized the direct, indirect, and cumulative impacts to the maximum extent practicable. The Guidelines require the Corps to make certain factual determinations addressing the potential short-term or long-term effects of a proposed discharge of dredged or fill material on the physical, chemical, and biological components of the aquatic environment. *See* 40 C.F.R. § 230.11. Among these factual determinations is the following provision:

> Aquatic ecosystem and organism determinations. Determine the nature and degree of effect that the proposed discharge will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms. Consideration shall be given to the effect at the proposed disposal site of potential changes in substrate characteristics and elevation, water or substrate chemistry, nutrients, currents, circulation, fluctuation, and salinity, on the recolonization and existence of indigenous aquatic organisms or communities.

40 C.F.R. § 230.11(e). According to the Guidelines, these factual determinations shall be used in conducting the alternatives analysis and in determining whether the proposed discharge includes all appropriate and practicable avoidance and minimization measures. *See* 40 C.F.R. § 230.11 (saying "[s]uch factual determinations shall be used in § 230.12 in making findings of compliance or non-compliance with the restrictions on discharge in § 230.10").

The wetland analyses found in the DEIS fail to determine the nature and degree of effect that the proposed discharge will have on the aquatic environment. The failure to include this information undermines the DEIS and makes it impossible for the Corps to determine whether the applicant has avoided and minimized impacts and also renders the alternatives analysis

meaningless because neither SCDOT nor the Corps has sufficient data to allow for a meaningful comparison of alternatives.

For example, in its preliminary alternatives analysis, the SCDOT examined how many acres of wetlands each of the 36 alternatives would impact. *See* DEIS at 3-40 (saying "[t]he wetlands which could be potentially impacted by each alternative were determined by quantifying the acreage of wetlands within the proposed right of way"). According to the DEIS, for the 36 alternatives carried through the preliminary alternatives analysis, the acreage of wetlands potentially impacted for each alternative ranged from 0.5 to 75.7 acres. Because 33 of the 36 alternatives were estimated to involve impacts to 26.4 acres of wetlands or less while three alternatives had 48.9 acres of impacts or more, the three alternatives with the higher estimated wetland impacts were eliminated. DEIS at 3-42.

This type of analysis, which relies solely on comparing wetland acreages, falls short of satisfying the Guidelines. Although the various alternatives impact a wide variety of aquatic resources, including freshwater ponds, freshwater forested/shrub wetlands, freshwater emergent wetlands, estuarine and marine wetlands and estuarine and marine deepwater, there was no effort to compare the quality and function of the types of waters that the various alternatives would impact. In this way, the analysis ignores whether one alternative might impact ten areas of degraded freshwater wetlands or ponds and whether another impacts ten acres of high functioning salt marshes. In fact, the National Oceanic and Atmospheric Administration raised this same concern in a previous comment letter. *See* letter from Miles M. Croom (NOAA) to Robert L. Lee dated June 4, 2009 at DEIS, App'x F (saying the wetlands screening analysis "may be oversimplified by not considering the quality of wetlands that would be impacted" and identifying eliminated alternatives that might have less severe aquatic and biological impacts than alternatives carried forward).

Even the more in-depth analysis involving the reasonable range of alternatives with respect to wetlands is overly simplified. For example, in comparing Alternative G to the other reasonable alternatives, the DEIS again focuses solely on the estimated direct impacts to freshwater wetlands and salt marsh. There is no functional analysis of the wetlands to be impacted and no consideration for how the various alternatives might differ in terms of impacts from construction and shading.

In sum, the failure to determine the nature and degree of effect that the proposed discharge will have on the aquatic environment makes it impossible for the Corps to conduct its alternatives analysis and to determine whether the project has avoided and minimized impacts in addition to the other findings of compliance that the Corps must make pursuant to the Guidelines.

E. The Proposed Mitigation Package Fails to Satisfy the CWA

On April 10, 2008 the EPA and the Corps issued a Final Rule on Compensatory Mitigation for Losses of Aquatic Resources under section 404 of the Clean Water Act. *See* 73 Fed. Reg. No. 70, 19,594-19,687 (Apr. 10, 2008) (codified at 40 C.F.R. pt. 230.91 and 33 C.F.R. pt. 325 and 332) (hereinafter referred to as the "Rule"). According to the EPA and the Corps,

"[i]n general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services . . . ." 33 C.F.R. § 332.3(b).

For this project, the JPN states that a total of 299.50 mitigation credits would be required for construction impacts under a "worst case" scenario. This includes 12.21 mitigation credits for shading impacts to tidal areas, 279.112 credits for the fill impacts to tidal areas, and 8.175 credits for freshwater wetland impacts. JPN at 3. The JPN states further that mitigation credits will be purchased prior to construction from "Huspa Mitigation Bank for tidal impacts, Congaree Carton Mitigation Bank for freshwater wetland impacts, or other approved mitigation banks." JPN at 3.

As an initial matter, the JPN does not provide sufficient detail regarding the proposed mitigation package. The new Rule states:

> For an activity that requires a standard DA permit pursuant to section 404 of the Clean Water Act, the public notice for the proposed activity must contain a statement explaining how impacts associated with the proposed activity are to be avoided, minimized, and compensated for. . . . *The level of detail provided in the public notice must be commensurate with the scope and scale of the impacts.*

33 C.F.R. § 332.4(b)(1) (emphasis added). The JPN simply does not contain sufficient information on the mitigation package in light of the scope and scale of this project, which involves impacts to significant aquatic resources. Moreover, the DEIS is similarly lacking. The DEIS indicates that it is "anticipated" that the SCDOT Huspa Creek mitigation bank would be the "preferred mitigation alternative." DEIS at 6-39. Beyond that, the DEIS states only that there may also be a 12-acre mitigation opportunity onsite or close to the project site. DEIS at 6-39. The DEIS then goes on to summarize some of the requirements of the new Rule and explains that: "Compensatory mitigation for impacts would be finalized during the permitting phase of the proposed project." DEIS at 6-40. Neither the JPN nor the DEIS has provided the public with a sufficient opportunity to comment on the mitigation package. Given the scale of this project, such an approach violates the new Rule.

Even with the limited information provided, we have concerns about what SCDOT have proposed thus far. One of the key aspects of the new Rule is the establishment of a watershed approach to mitigation. According to the Rule:

> The district engineer must use a watershed approach to establish compensatory mitigation requirements in DA permits to the extent appropriate and practicable. Where a watershed plan is available, the district engineer will determine whether the plan is appropriate for use in the watershed approach for compensatory mitigation. In cases where the district engineer determines that an appropriate watershed plan is available, the watershed approach should be based on that plan. Where no such plan is available, the watershed approach should be based on information provided by the project sponsor or available from other sources. The ultimate goal of a watershed approach is to maintain and improve the quality and

quantity of aquatic resources within watersheds through strategic selection of compensatory mitigation sites.

33 C.F.R. § 332.3(c)(1). There is no indication that SCDOT is planning to utilize a watershed plan to help determine where to mitigate the impacts of this project. Given the large scale of this project, the Corps should require a robust watershed analysis for purposes of devising a compensatory mitigation plan. This analysis should be shared with the public, and the public should be afforded an opportunity to comment on the mitigation proposal once the watershed evaluation is complete.

Further, the Huspa Creek bank is located in the Broad River watershed. By proposing to purchase mitigation credits in the Broad River watershed for impacts to wetlands in the Stono River watershed, SCDOT would fail to provide compensation in the impacted watershed. Such an approach would conflict with the Rule and the Guidelines. *See* 33 C.F.R. § 332.3(b)(1) and 40 C.F.R. § 230.12 (a)(3)(ii) (prohibiting permit issuance where "[t]he proposed discharge will result in significant degradation of the aquatic ecosystem . . ."). Mitigating the impacts of this project outside of the Stono River watershed is particularly problematic here where the Stono is already listed as impaired and the project, including the river crossings and induced growth and concomitant polluted runoff, will further exacerbate already present water quality problems.

Also, it is our understanding that the Huspa Creek mitigation bank may not have enough credits remaining to offset impacts from the proposed project. We request that SCDOT and the Corps disclose the status of currently available credits in the Huspa Creek bank, and, if necessary, explain how the impacts from this project will be offset if Huspa Creek is unable to provide the proposed mitigation.

F. The Permit Application Fails to Satisfy the Public Interest Review Under Section 404 of the CWA and Section 10 of the RHA

The Corps' criteria for evaluating a permit application under Section 404 of the CWA and Section 10 of the RHA are set forth at 33 C.F.R. § 320.4. Pursuant to these regulations, the "[d]ecision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest." 33 C.F.R. § 320.4(a). All factors which may be relevant to the proposal must be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. *Id.*

According to the DEIS, the recommended preferred alternative will result in a reduction in average trip time for drivers versus the no-build of 0.6 minutes for drivers in West Ashley, 4.6 minutes for drivers on Johns Island, and 0.6 minutes for drivers on James Island. DEIS at ES-16. These scanty reductions in average trip times simply do not satisfy the Corps' public interest review in light of the nearly half-a-billion dollar price tag for the project and the slew of impacts

to the region's natural resources, including the filling and shading of large acreages of wetlands, the induced sprawling patterns of development on Johns Island, and the exacerbation of water quality problems in the Stono River watershed, to name a few. A fair weighing of factors reveals that the project does not satisfy the public interest review and that the permit application should therefore be denied.

G. Timing of Corps Permit Application is Premature

The release of the JPN at this stage in the evaluation process is premature and does not afford the public a meaningful opportunity to comment on the project. There are significant issues that remain unresolved at this point in the evaluation process, and the JPN should not have been released until adequate information about the project's impact on wetlands and other resources could be disclosed to the public. For example, neither the DEIS nor the JPN discloses how stormwater from the new roadway would be addressed. In light of the fact that significant portions of Alternative G would be constructed at grade, it is important from a safety perspective for the agencies to determine how stormwater will be removed from the new roadway. Further, to protect the aquatic resources that the parkway would be constructed through and over, it is also important that the agencies evaluate methods for treating polluted runoff before it is discharged, especially given the already-impaired status of the Stono River. Depending on the type of structures and strategies that are selected to address stormwater, these facilities will likely involve additional impacts to aquatic resources, including additional filling of wetlands, which have not yet been disclosed in either the DEIS or the JPN.

Similarly, the DEIS and the JPN also fail to provide sufficient information regarding how the project will be constructed through the marshlands. As the DEIS acknowledges, "[s]alt marshes are particularly sensitive environments and are susceptible to damage from construction activities." DEIS at 6-42. The impacts from construction may include temporary filling, modification of marsh surfaces due to compaction, and soil displacement during piling installation. The process of constructing these facilities is likely to negatively impact the marsh by altering the micro-topographic features of the marsh surface that are crucial to the survival of resident marsh fishes and invertebrates, which in turn play a key role in the healthy functioning of the estuarine system.

According to the DEIS and JPN, it is still undetermined which method of bridge construction will be utilized for this project. After summarizing the four typical methods of building bridges through marshes in South Carolina (causeway on temporary fill, causeway on barges or pallets, temporary construction bridge, and top-down construction), the DEIS is unable to specifically describe the construction methods that will be used. Rather, the DEIS concludes only that "using a causeway on temporary fill or barges/pallets would prove most effective." DEIS at 6-47. Further, in discussing other wetland impacts that could occur from construction, the DEIS acknowledges that construction equipment "may need to access wetland areas located outside of the build alternative that is selected in order to access the areas to be developed. If access to wetland areas is required, plans for the restoration of the wetland area to be impacted would be prepared." DEIS at 5-254. The DEIS also explains that construction of the project could require the "use of wetlands as borrow areas," meaning wetlands could be excavated for purposes of providing fill needed for the roadway. DEIS at 5-254.

Until these matters and others are resolved, it is premature to release the JPN as the public deserves a full and fair opportunity to comment on the Section 404 permit application once there is sufficient information regarding the full range of impacts to wetlands and other resources.

II. The Corps Must Carefully Evaluate Potential Impacts to Federally Endangered Wood Storks

Section 7 of the ESA requires that each federal agency "shall insure that any action authorized, funded or carried out by such agency…is not likely to jeopardize the continued existence of any" listed species "or result in the destruction or adverse modification of" the species' critical habitat. 16 U.S.C. § 1536(a)(2). An important rookery for the federally endangered wood stork and other birds, including egrets, herons, and anhingas, is located approximately 0.8 miles south of Alternative G. JPN at 26. Moreover, Alternatives A and B would either bisect or be constructed within close proximity to the rookery. The Corps must be sure to consult with FWS regarding potential impacts to endangered wood storks because the construction of the proposed highway has the potential to harm wood storks and result in adverse modification to their habitat depending on the final road corridor that the agencies select.

Conclusion

We appreciate the opportunity to submit these comments on the proposal to extend I-526. For the reasons described herein, we believe the evaluation of the League's proposed NWTW deserved a careful evaluation under the Clean Water Act, the National Environmental Policy Act, the Department of Transportation Act, and other federal and state laws. We believe that a fair vetting of the practicable alternatives, and their relative positive and negative impacts, would have shown that a functional approach to the current traffic issues will provide the greatest opportunity for solving the transportation problems in the project areas. Nevertheless, the DEIS reveals that SCDOT has failed to carry its burden of clearly demonstrating that no practicable alternatives exist that do not require a discharge into wetlands or other special aquatic sites pursuant to the Section 404(b)(1) Guidelines under the CWA. Moreover, given its paltry transportation benefits and exorbitant cost, the recommended preferred alternative falls well short of satisfying the Corps' public interest review test. For these and other reasons, we respectfully request that the Corps deny the permit application for this project.

Sincerely,

Christopher K. DeScherer

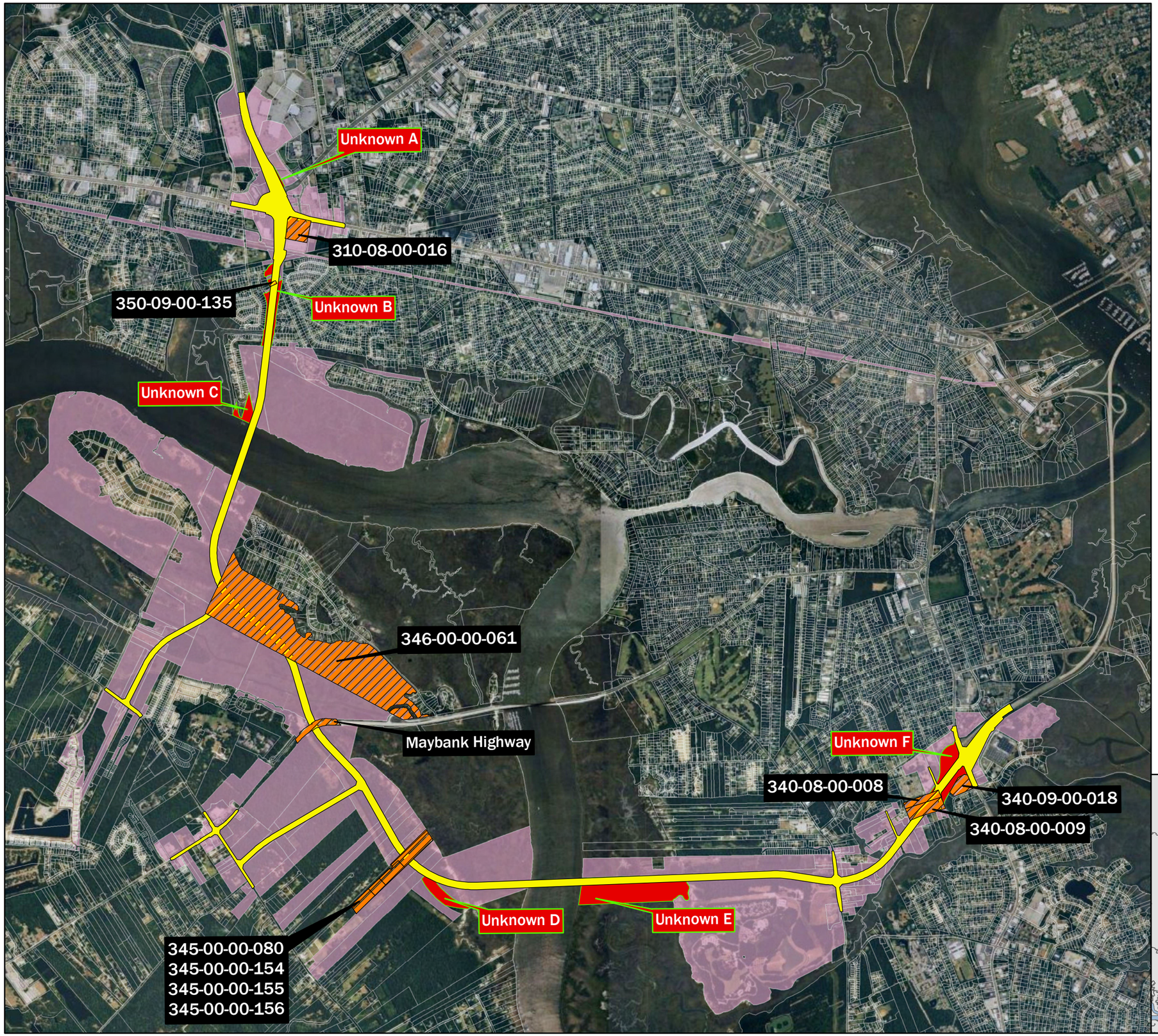
Lisa M. Saltzburg

Enclosures

cc: David Kinard, SCDOT
Robert Lee, FHWA
Kurt Taylor, Charleston County
Chuck Hightower, DHEC
Mark Giffin, DHEC
Susan Davis, SCDNR
Bob Perry, SCDNR
Pace Wilber, NOAA Fisheries
Mark Caldwell, USFWS
Ramona McConney, EPA
Robert Lord, EPA
Josh Martin, League
Kate Parks, League
Julie Hensley, Charleston County Park & Recreation Commission
Barbara Neale, OCRM

Ex. C

Mark Clark Expressway: Preferred Reasonable Alternative (Route G) and Intersecting Parcels



Legend

- Preferred Reasonable Alternative (Route G)
- Parcel Owned by SCDOT (Parcel ID labeled)
- Property Intersecting Route G (Unknown Ownership)
- Parcel Intersecting Route G

Disclaimer:
The routes displayed on this map are not a substitute for field surveyed data. The route for the preferred reasonable alternative shown here was acquired from SCDOT. Charleston County parcel data has some areas where land intersects the Preferred Alternative, but there is no recorded parcel in the GIS dataset. These areas therefore have unknown ownership to us at this time and may or may not represent additional property owned by SCDOT. These areas are shown in red on the map.

Data Sources: Charleston County Planning and GIS Departments, SC DOT, and Bing Maps Aerial Imagery (ArcGIS Online)
Last updated on September 29, 2010

0 0.5 1 2 Miles

N W E S

Southern Environmental Law Center