

January 13, 2001

Earl T. Robb
State Environmental Administrator
Virginia Department of Transportation
1201 East Broad Street
Richmond, Virginia 23219

Dear Mr. Robb:

Please accept this corrected copy of page two of my comments on the DEIS for I-73 submitted by letter dated January 12, 2001, on behalf of VAR and the Sierra Club. Two typographical corrections are provided that make the comments more readable.

I

Sincerely,

Tammy L. Belinsky

copies: Salem VDOT office

January 12, 2001

Earl T. Robb
State Environmental Administrator
Virginia Department of Transportation
1201 East Broad Street
Richmond, Virginia 23219

Dear Mr. Robb:

On behalf of Virginians for Appropriate Roads (VAR) and the Sierra Club, I submit these comments in regard to the Draft Environmental Impact Statement (DEIS) for I-73. These comments specifically address the adequacy of the DEIS in regard to its evaluation of impacts from the proposed project to the Roanoke logperch, a federally listed endangered species.

By reference, the comments of the attached letters and electronic mail correspondence are incorporated into these comments as well as all documents referenced by the attachments. The attached correspondence includes comments from Noel Burkhead, the scientist who proposed listing of the Roanoke logperch and from a current logperch expert, Paul Angermeier, as well as two graduate students currently engaged in logperch research. Paul Angermeier regularly provides consultation services to the Virginia Department of Transportation on road construction projects involving stream crossings.

In summary, the comments from the scientists indicate that the information provided in regard to the potential impacts to the Roanoke logperch is inadequate for meaningful analysis of the alternatives and the respective impacts to the logperch. Specifically, the DEIS is inadequate in regard to the evaluation of secondary and cumulative effects of the proposed project. The DEIS fails to acknowledge the well-known sprawl-inducing effects of highway construction and the impact of ancillary development on the logperch habitat. The value of the feeder streams to logperch survival is just beginning to be understood and the DEIS fails to recognize the secondary and cumulative effects this proposal could have on the logperch habitat. In regard to the construction phase, the analysis assumes mitigation will be adequate and therefore fails to disclose the impacts to the logperch and its habitat if mitigation measures are inadequate or fail.

Response: *The information provided in the DEIS was an attempt to compare the alternatives under consideration by comparing their potential to impact suitable habitat and known populations of the Roanoke logperch based on existing information. Table 4.7-6 demonstrated that this potential for most of the alternatives under consideration was similar depicting three potential areas of impact. A review of Figures 3.7-36 through 3.7-40 shows that Segment 371 of Build Alternative Option 4 and Segment 382 of Build Alternative Options 3 (a segment which also corresponds to a portion of the TSM Alternative) are the only alternatives where proposed construction would occur over a segment of a watercourse within a mile of where a population of Roanoke logperch has been documented to occur (in this case, the Roanoke River and the Pigg River, respectively). This information allowed for an informed decision based on existing information. Following the identification of the preferred alternative by the Commonwealth Transportation Board, the FHWA, VDOT and resource agencies such as the US Corps of Engineers, Fish and Wildlife Service, and Department of Environmental Quality, reviewed the location of the preferred alternative in the field to identify the stream locations where Roanoke logperch surveys would be needed. These surveys of the preferred alternative have since been completed as well as surveys of the revised alignment through the City of Roanoke and Roanoke County resulting from efforts to avoid the Southeast Roanoke Historic District. Based on these efforts, a single population of the Roanoke logperch was identified in the vicinity of the Pigg River crossing. A draft biological assessment that addresses potential impacts to the Roanoke logperch*

including secondary and cumulative effects and stormwater runoff has been prepared and included in the FEIS.

Cumulative impacts must also address the impacts from any already proposed projects which include the Roanoke River Flood Control project and the recently announced airport in Franklin County. The DEIS fails to assess any cumulative impacts including those from these two projects or any other road projects currently planned.

Response: *The draft biological assessment considered the cumulative impacts to the Roanoke logperch within the Pigg River watershed.*

While the DEIS pronounces that more will be done should a build alternative is selected, VAR and the Sierra Club assert that the DEIS violates the mandate of the National Environmental Policy Act (NEPA) to "rigorously explore and objectively evaluate all reasonable alternatives, and devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits." CEQ regulations § 1502.14. NEPA requires that information be provided for all alternatives so that both the decision makers and the public are fully informed of the present and future environmental impacts to enable reasoned decision making after balancing risks of environmental harm against the benefits to be derived from proposed action. The DEIS provides no information about the potential harm to the logperch under any alternative for either the decision makers or the public.

Response: *See the response provided above regarding Table 4.7-6 of the DEIS and the comparative assessment of potential impacts or harm to threatened and endangered specie populations and suitable habitat. The issues you cite are addressed through the development of a biological assessment, and a draft biological assessment has been prepared for the preferred alternative and included in the FEIS. The USFWS is on record as saying that neither a biological assessment nor surveys are required for all alternatives and that a biological assessment need only be prepared for the preferred alternative. In addition, they have also recommended that formal consultation, which results in a biological opinion, not be initiated until final design after the environmental document has been completed.*

In addition to impact from the build alternatives, the DEIS states that there would be potential impacts to the logperch habitat if the TSM alternative is selected. The DEIS goes on to state that a Biological Assessment will be performed in accordance with Section 7 of the Endangered Species Act only if a build alternative is selected. VAR and Sierra Club argue that a Biological Assessment is required whether the TSM or build alternative is selected based on the statement in the DEIS that habitat would be impacted under any construction option whether TSM or "build". Moreover, the Biological Assessment should have already been done to provide the information necessary to the decision makers and the public in selecting a project alternative. Failure to provide all information necessary to make a decision BEFORE an alternative is selected violates both NEPA and the limitation on the commitment of resources under the Endangered Species Act (ESA).

Response: *In this context, a build alternative is contrasted against the no-build alternative. Therefore, a build alternative is any alternative that could be implemented to meet the purpose and need of the project other than the no-build alternative. Accordingly, it is acknowledged that a Biological Assessment could also be required under the TSM Alternative if informal consultation with the USFWS determines one is necessary.*

NEPA does not require that all information be provided or developed before a decision is made; CEQ's regulations acknowledge that there may be gaps in information when a decision is made. If an alternative is selected that has the potential to impact an endangered specie, then no resources would be committed to implement the effected segment, other than necessary design work to complete the Section 7 formal consultation process. Further, section 3.4 of USFWS's Endangered Species Consultation Handbook states that "Biological assessments are not required to analyze alternatives to proposed actions." This language is reflected in federal regulation 50 CFR402.12(f) which states that "The contents of a biological assessment

are at the discretion of the Federal agency and will depend on the nature of the Federal action.” and which goes on to list items that **may** be considered for inclusion. In consideration of the discretionary nature of alternatives analysis under the aforementioned regulations and USFWS guidance documents and the fact that the DEIS provides a comparative analysis of potential threatened and endangered species impacts for all alternative considered, it has been determined that the DEIS complies with the intent of Section 7 and NEPA with respect to this issue.

NEPA and the ESA are separate processes and the completion of formal consultation under the ESA is not needed to complete NEPA. Federal regulation at 50 CFR 402.12 states that “The biological assessment shall be completed before any contract for construction is entered into and before construction is begun”. As stated above, the USFWS has gone on record in favor of deferring formal consultation for the Roanoke logperch until after the NEPA process is completed.

Predictably, the agencies have avoided using the "C" word in their meetings. The fact is, consultation in accordance with the ESA has started already whether the USFWS has declared it or not. As such, the Biological Assessment should have already been initiated, if not completed, in accordance with Section 7 of the ESA.

The failure to provide a Biological Assessment at this stage of the analysis and waiting until an alternative is selected effectively forecloses the implementation of more prudent alternatives that would not violate the ESA and presupposes the USFWS will not make a jeopardy opinion. And based on the complete inadequacy of the DEIS, this likely will be the case because the DEIS appears only to be concerned with impact on the logperch during construction of one stream crossing at a time, in complete isolation from all secondary and cumulative impacts of a project that will potentially impact three of four known habitats of an extraordinarily sensitive endangered species. This simply is ludicrous. This environmental review process is intended to aid agency decision making, not to prove ex post facto justification for it.

Response: *Informal consultation with the USFWS was initiated in 1998 through Inter-Agency Coordination Meetings (IACM). Coordination with USFWS has been ongoing since 1998 and environmental documentation has undergone review by USFWS and other federal agencies. Information set forth in a biological assessment is presented in the November 1999 Natural Resources Technical Memorandum, which was made available for agency review. A draft biological assessment of the preferred alternative has been completed and included in the FEIS. FHWA has had numerous discussions with the USFWS regarding formal consultation and requested that formal consultation be initiated in December of 2004. Formal consultation was only requested after surveys were conducted along the preferred alignment and the presence of the species confirmed. That request for formal consultation has since been withdrawn by FHWA because the USFWS requested additional project-specific information related to design and the construction schedule that is not available at this time. The USFWS has indicated that they prefer that formal consultation be carried out after the environmental document is completed during final design.*

As for violating the ESA, the selection of an alternative without a biological assessment does not violate the ESA. As stated previously, NEPA and the ESA are separate processes and the completion of a biological assessment or formal consultation under the ESA is not needed to complete NEPA. In addition, the ESA does not require the consideration of alternatives. Instead, the ESA established a process that must be followed when a federal agency proposes an undertaking. The ESA requires consultation with the USFWS regarding the potential impacts that a project may have on threatened and endangered species or critical habitat. There is truth to the statement that the selection of an alternative before completing the requirements of the ESA presupposes a “no jeopardy” opinion from the USFWS. This is based on past experience with other projects involving the Roanoke logperch where coordination with the USFWS determined that those projects and the associated construction methods would not pose a significant threat to the extinction of the species. But there is a difference in selecting an alternative under NEPA and proceeding toward construction of an alternative following formal consultation under the ESA with the USFWS. Both laws establish different legal standards that must be followed. NEPA is a procedural law. It establishes a process that must be followed; if you follow the process, then you have complied with the law.

The NEPA regulations allow that not all information may be known at the time a decision is made. The regulations include a built-in reevaluation mechanism to address new information that may arise on a project. In contrast, the ESA is a substantive law that requires a finding or determination, in this case, a biological opinion. The biological opinion serves as a prohibition mechanism to keep a project from proceeding should the USFWS arrive at a jeopardy opinion. It should be noted that if the USFWS issues a jeopardy opinion, they are required to also identify measures, which can be taken by the implementing agency to avoid the jeopardy opinion.

Finally, under the mandate of the Endangered Species Act, it is the duty of these agencies "to resolve water resource issues in concert with conservation of endangered species" and to use their authorities to further the purposes of the Endangered Species Act. 16 USCS § 1531. In light of this mandate, it is remarkable how threatening to the logperch this project appears. When the occurrence map for the Roanoke logperch, obtained from the Virginia Department of Game and Inland Fisheries website (noticeably missing from the DEIS), is overlaid on top of the project alternative map, this project appears to intentionally target the Roanoke logperch for extinction. Should a build alternative be selected, it has the potential to cross three of the four river habitats for the Roanoke logperch, i.e., the Roanoke, Pigg, and Smith Rivers. Yet the DEIS fails to identify and acknowledge that this is a distinct possibility.

Response: *Geographic Information System (GIS) files depicting one-mile-diameter areas containing known populations of threatened and endangered species in Virginia ("occurrence maps" of the above comment) are maintained by the Virginia Division of Natural Heritage (VDNH). GIS files provided by VDNH were used to prepare population occurrence maps provided in the DEIS (Figures 3.7-36 through 3.7-40). Reference to the VDNH database is provided in Section 3.7.6 and on page 5-7 of the DEIS. Although the Virginia Department of Game and Inland Fisheries (VDGIF) database allows for a listing of species within a three-mile search radius, no "occurrence maps" are available through VDGIF. Databases maintained by the Virginia Department of Game and Inland Fisheries were also reviewed in preparation of the DEIS. Reference to VDGIF databases used as part of the environmental assessment is provided in section 3.7.6.1.1 and on page 5-8 of the DEIS.*

Surveys have been conducted at all stream and river crossings of the preferred alternative where coordination with the USFWS determined that surveys were necessary. The results of these efforts only identified a single population of the Roanoke logperch in the Pigg River within the vicinity of the project. A draft biological assessment has since been prepared for this crossing and included in the FEIS.

FHWA is aware of the conservation mandate of the ESA and has been working with the USFWS to identify potential conservation measures for the Roanoke logperch. According to Amanda Rosenberger (December 2002), the major concern for the well-being of the species in the Pigg River is siltation and goes on to identify agricultural sources and specifically, cattle farms, as the primary source of that siltation. In response to Ms. Rosenberger's presentation, the concern of the USFWS for the long term viability of the Roanoke logperch in the Pigg River has increased because the existence of the Pigg River population may likely be in jeopardy of extinction whether or not I-73 is constructed. Therefore, FHWA, VDOT and the USFWS have had discussions about potential conservation efforts that could be implemented in conjunction with this project or well in advance of the project. The USFWS recognizes that apart from this project, the likelihood of conservation measures being implemented to protect the Pigg River population is low given the lack of available funding.

Similarly, the ESA requires the development and implementation of a habitat recovery plan designed to enhance logperch survival and ultimately remove the logperch from the endangered list--the ultimate goal under the ESA. I have not found the construction of a highway through every river body supporting the species in the logperch recovery plan. Conversely, the number one means of reaching the goal of the recovery plan is to protect and enhance the habitat. The DEIS fails to reconcile this project with the goal of the 1992 Roanoke Logperch Recovery Plan. In fact, the DEIS fails to even recognize the Recovery Plan's existence.

Response: *To infer that construction of I-73 “through every river body supporting the species” would automatically impact the populations in those rivers is disingenuous. It has already been established that the Roanoke logperch does not exist in the Smith and Roanoke Rivers in the vicinity of the proposed crossings of the preferred alternative. In addition, not every affected segment of these rivers contain suitable habitat for the specie. Finally, I-73 would cross the subject rivers via bridges instead of being “constructed through” them.*

The Recovery Plan prepared by the U.S. Fish and Wildlife Service for the Roanoke logperch in 1992 was reviewed in preparation of the biological assessment and consulted pursuant to developing mitigation measures proposed to address temporary, cumulative, and secondary impacts within the control of VDOT and FHWA. The Recovery Plan identified numerous threats to the Roanoke logperch and causes for the species decline, many of them non-road related. For example, in the Nottoway River, poor agricultural and logging practices are cited. In the Smith River, cold water releases from Philpott Reservoir and an upstream fabric plant were cited. In the Middle Roanoke River, pollution from the greater Roanoke area and historically, the Smith Mountain/Leesville Reservoirs long pumped storage project were cited. In the Pigg River, chemical spills and siltation were cited. Most recently, agricultural practices were cited as the primary source of siltation. In the North Fork of the Roanoke River, silt washed from agricultural lands is cited. In the Upper Roanoke River, human uses, development, major roads, railroads, non-point source pollution, point source pollution (pre-1970), toxic spills (liquid manure storage facilities were specifically cited), channelization and levee construction, and floodplain development were cited. Therefore, regardless of the conservation measures implemented in conjunction with this project, the threats to the Roanoke logperch will remain because many of them are from non-highway sources.

The DEIS for the proposed I-73 is so inadequate it precludes the meaningful analysis required under NEPA and violates the intent of the Endangered Species Act. As such, VAR and the Sierra Club respectfully request the preparation and circulation of a revised draft of the EIS.

Sincerely,
Tammy L. Belinsky

Attachments:
letter from Dr. Paul Angermeier
letter from Brett Albanese
letter from Amanda Rosenberger
electronic mail correspondence from Noel Burkhead

copies:
VDOT Salem District Office
Virginians for Appropriate Roads
Sierra Club
Peter Stokley, USEPA/EPIC
Bruce Blanchard, US Dept. of the Interior, Office of Environmental Project Review

To: Tammy Belinsky <wildlaw@rev.net>
Subject: Re: HELP if you can... 1 listed endangered fish in path of highway!
X-Mailer: Lotus Notes Release 5.0.3 March 21, 2000
From: noel _ birkhead@usgs.gov
Date: Fri 22 Dec 2000 13:26:08 -0500
X-MIMETrack: Serialized by Router on gsvaresh01/SERVER/USGS/DOI(Release 5.0.3 March 21 2000 at 12/22/2000 01:32:14 PM)

Dear Tammy

Years ago, before federal employment in 1988, I was the biologist who proposed the listing of the Roanoke logperch as endangered. I studied the logperch for two years (some of data are in Freshwater Fishes of Virginia, Robert E. Jenkins and Noel M. Burkhead 1994 American Fisheries Society, Bethesda, MD. The \$125-book is now on sale from AFS for \$10-there may be copies left. You can inquire at the AFS website.

Because the Roanoke logperch is a federally listed species the DOT must file a Section 7 consultation report with the Fish and Wildlife Service. A Section 7 consultation is basically an eis that will in case of the DOT, try to demonstrate "no take" i.e., no harm to the logperch. The Roanoke logperch is an obligate benthic species, i.e. it conducts all of the activities critical to survival—spawning, feeding, and sheltering on the stream bottom. Because it is a bottom spawning species, eggs and early larvae are very vulnerable to excessive sedimentation. Hence, the DOT would have to demonstrate that the road project(s) would not produce excessive sedimentation during April and early May the time frame for logperch spawning. Additionally because the logperch feeds on insect larvae that live on the bottom of streams the DOT would have to demonstrate that excessive sediments would not interfere with the species ability to feed. Since feeding rates of logperches decline in winter (it's cold blooded) food consumed in the latter portion of summer is critical to building energy reserves necessary to surviving winter. So special means to abate sediment would have to be done through about middle of July through August and September.

Because the logperch survives as fragmented, disjunct populations, it has lost some genetic diversity (evolved during eons of coping with environmental extremes) through loss of extirpated populations. All remaining populations of this endangered species are critical to its survival: none can be considered insignificant to its long-term survival. I am unsure whether the logperch will make it another 50 years given the rate of habitat loss of the past two decades. Thus any construction projects located along any of the rivers and creeks presently occupied by the logperch will cause harm to it unless these stream reaches are protected from modification. Remember, modification to habitats do not have to specifically harm logperches. Degradation can ripple through aquatic communities as the result of the most subtle changes (such as a light smothering of sediment or turbid water during spawning). Because most logperches only live to three or four years-age, a relatively short duration impact of several years could be enough to cause recruitment failure in consecutive age classes thereby dramatically increasing the likelihood of extirpation of the affected population. Such is the predicament of all short lived organisms.

All of these considerations must be accounted for when filing for "no evidence of take" under a Section 7 consultation. Contact the servicing U S Fish and Wildlife Biologist probably Andrew Moser: Andrew_moser@fws.gov). You may also wish to contact Paul Angermeier at the Department of Fisheries and Wildlife Conservation VPI (540/231-4625) to learn of recent conservation issues affecting the logperch. Additionally I suggest you contact Bill Tanger (540/343-3963) regarding conservation groups active on the Roanoke River. I hope this thumbnail summary helps you.

Season's greetings, Noel

Noel Burkhead
US Geological Survey

Florida Caribbean Science Center
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Response: *These comments were considered and addressed to the degree necessary in preparation of the biological assessment for the preferred alternative. It is noted that the presence of an endangered or threatened specie in the study area of a project does not invoke Section 7. Rather, it's a finding by the USFWS or the federal action agency that their proposed undertaking may effect the specie in question. At that time, Section 7 is entered into and a biological assessment prepared.*

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January 9, 2001

Ms. Tammy Belinsky
Virginians for Appropriate Roads
9544 Pine Forest Rd.
Copper Hill, VA 24079

Dear Ms Belinsky:

As you requested, I have reviewed the draft EIS for the proposed I-73, including the Natural Resources Technical Memorandum. The EIS has several major inadequacies that preclude an informed assessment of environmental impacts on Streams in general and on Roanoke logperch in particular. Below, I summarize the most serious inadequacies.

- 1) Actual effects on aquatic species are not estimated. Although construction impacts may be "minimized" by applying various BMPs, those impacts are not eliminated. VDOT does not estimate effects of individual construction sites or the cumulative effects of several dozen construction sites. A realistic assessment of impacts would need to recognize that sediment-loading in upstream sites also contributes to loading downstream. That is, effects of each stream crossing are not independent.
- 2) The linear extent of effects on streams due to construction is grossly under-estimated. These effects, such as sediment-loading, are not limited to the dimensions of construction sites. Sediment, especially fine sediment travels downstream, sometimes for miles. A case in point is a massive sediment-loading that occurred on Wilson Creek in Montgomery County in 1999. A road construction site (supervised by VDOT) was located over a mile from Wilson Creek, but a rainstorm deposited a blanket of mud throughout several miles of Wilson Creek and North Fork Roanoke River.
- 3) Post-construction effects of pollution are not assessed. The acute and chronic effects of highway-related pollutants are a more serious long- term threat to stream biota than are effects of highway construction. Major sources of pollution include toxic spills from truck wrecks and runoff from the highway. The Technical Memorandum (page 4-10) offers weak evidence that highway runoff is not acutely toxic. However, bioassays typically are performed with ecological generalists such as rainbow trout and fathead minnow over very short timeframes (e.g., a few days). Such tests provide little insight into long term-effects on the many specialized species native to the Roanoke River drainage.
- 4) Effects of altered flow regime are not assessed. The variation in water flow through time (over days, months, or years) is a critical ecological factor that strongly influences reproductive success, food availability, and survival of stream biota. The amount of impervious surface in a watershed strongly affects flow regime. Adding impervious surface (e.g., roadways, buildings, parking lots) makes flow regimes more "flashy"(more runoff, less percolation), which also destabilizes stream channels, causing more erosion. The proposed highway and the projected urban sprawl that will follow will substantially increase the amount of impervious surface in the affected watersheds and could dramatically alter flow regime for some streams.

- 5) The list of invertebrate taxa is uninformative. The Technical Memorandum (Appendix B) lists families of insects but omits a myriad of other benthic invertebrate taxa that occur in the region's streams. Further, family-level taxonomy is too coarse to allow an assessment of whether rare or otherwise valued species occur in the study area.
- 6) In short, the draft EIS needs substantial improvement before informed decisions on I-73 alternatives can be made. In absence of more information I can only invoke the general rule that less highway construction is less environmentally damaging than more construction. Thus it follows that the no-build and TSM alternatives are likely to incur less harm to streams and Roanoke logperch than are the build alternatives. I hope these comments help. Let me know if you have further questions.

Sincerely

Paul Angermeier
Associate Professor

Response: *These comments were considered and addressed to the degree necessary in preparation of the biological assessment for the preferred alternative.*

January 7, 2001

Tammy Belinsky
Virginians For Appropriate Roads
9544 Pine Forest Road
Copper Hill, Virginia 24079

Ms. Belinsky:

I have recently reviewed the DEIS for the proposed section of Interstate 73 between Roanoke and the North Carolina State line and support the TSM alternative because it addresses concerns over safety on U. S. Route 220 but will be much less damaging to natural resources than any of the build options. The cumulative impact of the build options on the integrity of terrestrial and aquatic communities will be substantial, but I am restricting my comments to probable impacts on the federally endangered Roanoke logperch (*Percina rex*) because of my expertise in that area. My expertise stems from a primary research interest in the conservation biology of fishes along with my involvement with a monitoring project for the Roanoke logperch in the mainstream of the Roanoke River since 1997 (Ensign et al. 2000).

My primary concern is that the DEIS focuses too narrowly on site specific impacts (e.g., bridge crossings) and underestimates the cumulative impact to Roanoke logperch and aquatic communities in general. Recent advances in stream fish ecology indicate that fishes depend not only on the habitats where they are abundant but also on "supporting" habitats that occur throughout aquatic landscapes (Schlosser 1991). While the Roanoke logperch can clearly be categorized as a mainstream river species, it is doubtless affected by the quality and quantity of water supplied by tributary streams--it may also exploit tributary streams directly for feeding and refuge during harsh environmental conditions. The DEIS makes no connection between the widespread degradation of tributaries and impacts to Roanoke logperch populations. The impacts to the tributaries themselves are understated because the DEIS does not consider cumulative watershed level impacts (see Weaver and Garmen 1994; Albanese and Matlack 1999, Stancil 2000) following the economic growth and urbanization that will be associated with the project.

While the impact of bridge crossings over the mainstream of the Roanoke, Pigg, and Smith rivers will pale to comparison to the cumulative impacts mentioned above, they are also understated by the DEIS and represent a real threat to the continued existence of logperch. The most serious omission is the failure to recognize the threat of chemical spills following truck accidents on the new interstate. Chemical spills have killed large numbers of logperch in the past and were specifically identified as a threat to logperch in the recovery plan for the species (U.S. Fish and Wildlife Service 1992). While logperch populations have recovered from previous spills, recovery from future spills is uncertain because cumulative impacts associated with the project may decrease the viability of populations that might otherwise provide a source of colonists to spill affected areas.

Thank you very much for considering my comments and passing them on to the appropriate people. I would be happy to discuss them further with you or anyone else associated with this project.
Sincerely,

Brett Albanese
PhD Candidate
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Phone (540) 633-5021 (home with answering machine).

Literature Cited

Albanese, B. and G. Matlack. 1999. Utilization of parking lots in Hattiesburg, Mississippi, USA and impacts on local streams. *Environmental Management* 24:265-271.

Ensign, W.E., P.L. Angermeier, B. Albanese, and G.H. Galbreath. 2000. Pre- construction monitoring of the endangered Roanoke logperch (*Percina rex*) for the Roanoke River Flood Reduction Project. Final Report to United States Army Corps of Engineers, Wilmington, NC. 32 pp.

Schlosser, I.J. 1991. Stream fish ecology: a landscape perspective. *Bioscience* 1991: 704-712

Stancil, V.F. 2000. Effects of watershed and habitat conditions on stream fishes in the upper Roanoke River watershed. Master's Thesis. Virginia Polytechnic & State - University, Blacksburg. 146 pp. Available online at http://scholar.lib.vt.edu/theses/available/etd-07072000_19590043/restricted/Stancil_ETD.PDF

U.S. Fish and Wildlife Service. 1992. Roanoke logperch (*Percina rex*) recovery plan. Newton Corner, Massachusetts. 34p.

Weaver, L.A. and G.C. Garmen. 1994. Urbanization of a watershed and historical changes in a stream fish assemblage. *Transactions of the American Fisheries Society* 123: 162-172.

- I take full responsibility for my comments, they do not necessarily reflect the view of the Department of Fisheries and Wildlife Sciences or Virginia Tech.

Response: *These comments were considered and addressed to the degree necessary in preparation of the biological assessment for the preferred alternative.*

January 8, 2001

Tammy Belinsky
Virginians For Appropriate Roads
9544 Pine Forest Road
Copper Hill, Virginia 24079

Dear Ms. Belinsky:

I am a graduate student in the Department of Fisheries and Wildlife Sciences and a colleague of Brett Albanese. I am also active in the monitoring program for the federally endangered Roanoke logperch (*Percina rex*) in the Roanoke River, and I am completing a project funded by the Virginia Department of Game and Inland Fisheries assessing Roanoke logperch habitat use in the Roanoke, Pigg, Smith, and Nottoway rivers. In addition to adding my complete support and corroboration with Mr. Albanese's comments on the DEIS proposed section of Interstate 73 between Roanoke and the North Carolina State line, I wish to add a few additional comments based on my knowledge of the Smith and Pigg rivers.

First, the populations of Roanoke logperch in the Smith and Pigg rivers are considered highly endangered and are not well understood. Most of what is known about these populations comes from sporadic surveys completed by VDGIF, a study by Burkhead (1983), and recent surveys by myself and Dr. Doug Novinger in the Department of Fisheries and Wildlife Sciences. Logperch are only rarely captured in the Smith River either above or below Philpott Reservoir. The extreme temperature of the coldwater Smith River downstream of Philpott Reservoir has restricted the logperch population and isolated a small refuge population in Town Creek. Burkhead (1983) reported the Town Creek population of the logperch appears restricted to the extreme lower portions of the tributary. More recent surveys of the Smith River (Rosenberger and Novinger, unpublished data) indicate that little has changed since Burkhead's 1983 assessment. The importance of Town Creek as a warm water refuge for the Smith River Roanoke logperch population further emphasizes the importance of tributaries to this endangered species continued survival in these highly impacted systems. It is critical that DEIS consider these tributaries in its environmental impact assessment, not only as contributors to water quality of the watershed, but as refugia from spills and suboptimal conditions in mainstream rivers.

Burkhead (1983) reported that Roanoke logperch could be found in only 1 river km of the Pigg River, and a spill in 1975 seemed to have severely impacted this population. More recent surveys (Rosenberger, unpublished data) indicate that the population has extended beyond 1 km and seems to be recovering, despite heavy silt loads into the river. The slow recovery of Roanoke logperch after this 1975 spill indicates that DEIS should consider chemical spills from bridges and roadways as serious environmental threats in its impact assessment. Further, the Pigg River population of Roanoke logperch shows potential for recovery, unless severely disturbed. Observations of Roanoke logperch in the Pigg indicate that its population is restricted to isolated high-flow, scouring habitats

because of heavy silt loads in the river. DEIS should be aware that any activity that could increase silt loads on the Pigg River could seriously threaten the remaining logperch in this system.

The Roanoke River holds what is considered the most healthy and robust population of Roanoke logperch. Unfortunately, due to urban development in Blacksburg, Salem, and Roanoke as well as plans for channelization in the Roanoke River, this population is under continuous threat. As the Roanoke River population declines the importance of satellite populations in the Smith and Pigg rivers increases, not only for preservation of this endangered species, but as source populations for potential reintroductions. Therefore, DEIS must seriously consider alternatives that minimize impact on these three highly important watersheds.

Thank you very much for considering my comments and passing them on to the appropriate people. I would be happy to discuss them further with you or anyone else associated with this project.

Sincerely

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Literature Cited:

Burkhead(1983) Ecological studies of two potentially threatened fishes (The Olangefin madtom. *Noturus gilberti* and the Roanoke logperch (*Percinia rex*) endemic to the Roanoke River damage. Report prepared for the Wilmington District Corps of Engineers Contract no. DACW-54-81-C-022.

Response: *These comments were considered and addressed to the degree necessary in preparation of the biological assessment for the preferred alternative.*

1024 Whetstone Road
Ferrum, Virginia 24088
January 3, 2000

Earl Robb
Environmental Administrator
Virginia Department of Transportation
140 I East Broad Street
Richmond, Virginia 23219

Dear Mr. Robb

Please find enclosed comments for the record pertaining to the I-73 Location Study. These represent one of several sets of comments that will be submitted in behalf of Virginians for Appropriate Road (VAR).

The Virginia Department of Transportation has assured citizens that public comments are considered seriously. Please notify me as to how comments are processed and used.

Thank you.

Sincerely,

Jerryanne Bier

enclosure

COMMENTS
Pertaining to the I-73 Location Study

Submitted by: Jerryanne Bier
1024 Whetstone Road
Ferrum, Virginia 24088

Date: January 3, 2000

I am opposed to all build options and support the Transportation Systems Management alternative. The following comments about the 1-73 Location Study and include information analyses based on my experience as a citizen in the public participation process, an active member of Virginians for Appropriate Roads, and a review of the 1-73 Draft Environmental Impact Statement and accompanying 1-73 Technical Memoranda published in October 2000. I request and expect to receive a response as to how the cited deficiencies will be addressed.

My comments center on the following:

A) CORRIDOR LOCATION STUDY FOR INTERSTATE 73 THROUGH VIRGINIA

(March 1994)

SUPPLEMENTAL CORRIDOR LOCATION STUDY FOR 1-73 THROUGH VIRGINIA

(December 1994)

Deficiencies to be addressed:

- 1) The ranking of alternative corridors on which the decision to route 1-73 through Roanoke was based is unsubstantiated and flawed.
- 2) Alternative 6B - the alternative selected - was not submitted to the same evaluative criteria as the other 12 alternatives.

B) IDENTIFICATION OF ALIGNMENTS AND COMPILATION OF 52 DISTINCT SEGMENTS FOR STUDY CONSIDERATION

Deficiencies to be addressed:

- 1) The inclusion of 52 distinct segments which can be assembled in close to 200 different combinations for an eventual alignment significantly impedes a fair and reasonable assessment of the impacts and consequences of proposed corridors.
- 2) The consideration of 52 distinct segments which can be assembled in close to 200 different combinations is unrealistic, impractical and constitutes an egregious misdirection of resources.
- 3) The description of four basic corridors - most eastern, eastern, central, and western is inappropriate and misleading.

C) 1-73 DRAFT ENVIRONMENTAL IMPACT STATEMENT and TECHNICAL MEMORANDA

Deficiencies to be addressed

- 1) Purpose and Need for the Project is inadequate and prejudicial.
- 2) The Transportation System Management alternative is inadequately and unfairly represented. Bias in favor of build alternatives is evidenced. Analysis, conclusions and interpretations throughout the DEIS are based on incomplete and insufficient data and/or documentation.
- 3) The DEIS contains errors, inaccuracies and unsubstantiated statements which significantly impact conclusions, interpretations, and eventual recommendations.

D) PUBLIC INVOLVEMENT

Deficiencies to be addressed:

- 1) Stakeholder identification and interviews are not representative of the study area community.
- 2) Citizen information meetings of 1994 do not adequately meet requirements for public participation.
- 3) The timing of public hearings impedes citizen participation.
- 4) The length and timing of public comment period on the DEIS are insufficient and constitute unfairness and hardship on the public.

E) TRANSPORTATION POLICY

Deficiency to be addressed

- 1) The Location Study fails to consider reasonable alternatives.

A)

CORRIDOR LOCATION STUDY FOR INTERSTATE-73 THROUGH VIRGINIA (March 1994)

SUPPLEMENTAL CORRIDOR LOCATION STUDY FOR 1-73 THROUGH VIRGINIA (Dec

1994) 1) Ranking of Alternative Corridors (Table 6) evaluation criteria for economic impact and public support is unsubstantiated and misleading.

- Alternatives 6A and 6 were ranked 1 and 2 respectively as having the "most positive economic impact on the State" based on a VEC study. The VEC study measured the amount of economic development that currently exists at each interchange and used a model to measure the effects of future development on employment and employee compensation. The study failed to consider the fact that there was currently little to no economic development along many of the proposed 6 and 6A interchanges in contrast to the already developed areas along 1-81 and 1-77 that form a major portion of other alternatives. This factor makes the ranking of 6A and 6 predicated on data that is predisposed to show greater change because of the existing low level of economic development in the 6 and 6A corridor, making it inevitable that 6A and 6 would be ranked 1 and 2. In addition, the scope of the VEC study is limited to interchange development in the form of fast food restaurants, motels and gas stations and a narrow indicator of economic impact. **Thus the ranking of 6A and 6 is prejudicial and flawed.**
- Alternatives 6A and 6 both ranked 1 in the evaluation criteria for public support. Yet no citizen information meetings were held in Franklin County which includes a major portion of the 6A and 6 corridor. In the Public Comment Summary (Table 5) there is no listing of public comments opposing any new interstate or preference for using existing highways even though a summary of general public letters shows at least 12 out of 287 expressing this view. Review of original documents for the comments revealed that 849 of the 965 letters indicating preference for 6 or 6A were form letters. Further, a summary of general public letters received through March 17, 1994 shows out of 2871 comments, 107 were opposed to alternates 6 and 6a, 29 supported 6 and 6A. In addition, the 1200 citizens attending the public information meetings in January and February 1994 represents a miniscule percentage of a population of over 400,000 in the corridor study area. These factors call into question the authenticity and credibility of the public support rankings. Since this ranking was a major determinant in the selection of the 6A corridor, **the decision was based on inadequate and faulty information.**

2) According to the Supplemental Corridor Location Study For I-73 Through Virginia, after alternative 6A was selected by the Commonwealth Transportation Board in March 1994,

concerns over the proposed location of 1-73 in the Bent Mountain area resulted in identification of a refined corridor alternative known as 6B. The Supplemental Corridor

Location Study For 1-73 Through Virginia is provided as an evaluation of the refined alternative considering environmental impacts, economic impacts, traffic service, and planning cost estimates. This supplemental study states:

- ✓ "Alternatives 6A and 6B are basically equal in environmental impacts."
- ✓ "Alternative 6A is 20 miles shorter than 6B and would offer a shorter travel time for through traffic."
- ✓ "Alternative 6A would be less costly" than 6B.

The locations of 6A and 6B routes are vastly different. (Note the 20 mile variance cited above and the corridor maps showing 6B routed along 1-81 and 1-581 through the urban setting of Roanoke in contrast to 6A through rural countryside.) Yet no separate evaluation of the 6B alternative for environmental impacts was conducted. Nor was there any evaluation of public involvement or support for the 6B alternative. The 6B alternative was selected without adequate evaluation.

In response to the new alternative 6B, the Virginia Transportation Research Council prepared a report to assess and compare the probable economic impacts of the following alternatives: "Corridor 6B to primary standards, Corridor 6B to interstate standards, Corridor 6A to primary, and Corridor 6A to interstate." It is apparent from this report that VDOT at this time was considering the 1-73 project in terms of primary standards as well as interstate standards, considerations that were not carried forward to fulfill the mandate for consideration of reasonable alternatives.

An 1-73 Economic Impact Analysis: Alternatives 6A and 6B referenced in the Supplemental Study states that the new corridor alternative 6B was initiated "in light of the fact, unrecognized in March 1994, that West Virginia and North Carolina plan to build their pieces of the highway to primary standards rather than to interstate standards." This is in contrast to the earlier explanation that the 6B refinement was in response to concerns in the Bent Mountain area. **There is a clear discrepancy in documentation as to why and how 6B came about, a discrepancy that requires a full disclosure and accounting not presently part of any record.**

DEFICIENCIES TO BE ADDRESSED:

- Insufficient and misleading criteria evaluation in ranking and subsequent selection of the 6A alternative.
- Lack of accountability for the 6B alternative selection.
- Insufficient criteria evaluation for the 6B alternative, especially in environmental impact and public participation.*
- The Alternatives and Screening Technical Memorandum (October 2000) states that VDOT screened and ranked each of the 13 corridors for five evaluation criteria: environmental impact, economic impact, traffic service, capital cost and public support. "**(1-1) VDOT did not do this: there was no evaluation of 6B for public support. The other criteria evaluation for 6B equivocated it with 6B although the routing goes through an urban setting in contrast to 6A avoiding Roanoke entirely.**

Response: *The action for which comments are being sought is proposed I-73 as presented in the DEIS dated October 25, 2000. The feasibility study initiated seven years before the DEIS was approved is not open for comment. Feasibility studies, planning studies, technical studies, etc. in and of themselves are not NEPA documents subject to CEQ's requirements for purpose and need, alternatives development, analysis of environmental impacts, and public involvement. Instead, the decision to prepare a feasibility study using federal funds is an action subject to the requirements of NEPA, but that action meets the criteria for a categorical exclusion under section 1508.4 of CEQ's regulations and section 771.117(a) of FHWA's regulations. These are actions that do not require any further NEPA approvals by FHWA because they do not involve or lead directly to construction nor do they involve significant impacts. Had VDOT not used federal funds, for the feasibility study, then a CE determination would not have been required either. Further, feasibility studies do not result in implementable projects; they don't establish a location that FHWA takes action on nor do they establish a project that will be developed through final design, right-of-way acquisition, and construction. The feasibility study carried out by VDOT only sought to narrow down the area over which VDOT would study the location of I-73 further. As a feasibility study, it satisfied any guidelines that exist for feasibility studies. VDOT could*

have simply established the study area for I-73 without conducting a feasibility study and not violated any federal laws.

There are no NEPA public involvement requirements for actions that meet the criteria for a categorical exclusion; any public involvement performed for categorically excluded actions (preparation of a feasibility study in this case) is above and beyond what NEPA requires. In similar fashion, MPOs often prepare feasibility studies to determine what types of improvements to include in their long range plans. The preparation of those feasibility studies are subject to NEPA if they use federal funds to prepare them (as indicated above with the reference to CEQ's and FHWA's regulations), not the subject or content of the feasibility studies, themselves. For example, if the Hampton Roads MPO prepares a feasibility study to determine whether or not it is practical to implement light rail in the region, the physical preparation of the feasibility study itself would be subject to NEPA, not the light rail project that is the subject of the feasibility study. Notwithstanding, as stated in Section 2.2 (Alternatives Development and Alternatives Eliminated from Study) of the DEIS, VDOT conducted the corridor feasibility study which evaluated 13 broad corridors or locations for the proposed I-73 in Virginia and in January and February of 1994, five public information meetings were held on the feasibility study (even though not required by NEPA). Approximately 1200 citizens attended these meetings which were held in Abington, Whytheville, Blacksburg, Roanoke, and Martinsville. In March of 1994, after VDOT completed the feasibility study, the Commonwealth Transportation Board selected a proposed location for the I-73 corridor that entered Virginia from West Virginia on Route 460 west of Narrows, and which generally followed Routes 460 and 220 to the North Carolina State line. However, in late 1994, the cities of Roanoke and Salem and the County of Roanoke expressed a desire that the location of I-73 be improved by routing it along I-581 and I-81 because they saw its benefit as a tool to facilitate economic development. In December of 1994, VDOT prepared a supplemental report for I-73 that determined it feasible to refine the location of I-73 using I-581 and I-81. The CTB approved the revised location and with the passage of the NHS Designation Act of 1995, Congress included the CTB-approved corridor for Interstate 73 in legislation which was the impetus for the draft EIS. It is important to also note that CTB and their decision-making process is not subject to NEPA either; it only applies to federal decisions and federally-funded actions.

B)

IDENTIFICATION OF ALIGNMENTS AND COMPILATION OF 52 DISTINCT SEGMENTS FOR STUDY CONSIDERATION

- Having citizens draw lines on a map as was done in the public information meetings in early 1998 generated suggestions for a composite of general routes, but to incorporate these lines into a maze of possible alignments serves to unnecessarily complicate the process and utilizes public resources inappropriately. The claim in the Alternatives Identification and Screening Technical Memorandum (1-1) that a broad range of options must be considered to meet the stated objectives of the study does not necessitate a project having 52 different segments with close to 200 possible final single routings. Rather, the "broad range of options" should include not just multiple alignments of build options at interstate standards, but other corridor-length possibilities at less than interstate standards.
- 1-73 Corridor options are presented as four basic routes with variations. Given the 52 identified segments, however, there are close to 200 possible combinations that could be used as a final identified alignment. "*The options are considered as representative routes or alignments for 1-73, although the segments could be combined to form other options that could be considered.*" (DEIS, S-2) It is far beyond reason to expect the public, much less highway officials, to address and assess all these possible combinations in terms of real impacts and consequences. Inviting the public to review and comment on four general corridors when segments can be combined in any variety of ways is inappropriate, unproductive, and misleading. When the most eastern alignment (option 1a) and the "western" alignment (option 4) include a common segment (192A), the "representative" routes have no realistic application. Confusion and frustration are the result. How can citizens be expected to comment intelligently on corridors when we really do not know what the **entire**

corridor alignment is? Addressing and assessing nearly 200 different potential full-length corridors is unrealistic and unmanageable. "Representative" routes or alignments do not allow reasonable evaluation of impacts in any meaningful way. There is a significant discrepancy in all topical impacts between a portion of the road being east of US Route 220 and being west of US Route 220. Yet, there is no information in the DEIS that presents a full evaluation of genuine full corridor alignments.

- The use of 52 segments and the possibility of combining them in any of close to 200 combinations reduces the credibility of the study analysis. When tables include summary information about travel times, average daily traffic, visual quality and the myriad of other evaluative criteria based on four "representative" routes when in fact, an alignment could contain portions of any and all, the information lacks credibility. To suggest that alignments that include segments varying by miles and having vastly differing landscapes have "roughly" the same impact and consequence" constitutes irresponsible and inadequate reporting.

DEFICIENCIES TO BE ADDRESSED:

- 1) Absence of credible evaluative information about specific alignments for the entire length of the study corridor.
- 2) Inappropriate expenditure of resources from development and study of impractical and peripheral segmentations.
- 3) Inaccurate and insufficient information presented to the public via identification of four representative routes/alignments which have multiple variations with potentially multiple impacts and consequences.

Response: *The entire DEIS and its summary document evaluate information for each alternative for the entire length of the corridor. This evaluative information was developed for those issues and resources that were identified during the scoping process, which involved a series of citizen information meetings, as being important and/or critical to decision making.*

As discussed in Section 2.2.2 (Location Study Alternatives Development) and the Alternatives Identification and Screening Technical Memorandum, the options were broken into segments to allow for elimination of those segments that were unsuitable for further study (fatal flaw or redundant) while retaining portions of the options that merited further consideration. Therefore, instead of eliminating entire corridors proposed by the public because of fatal flaws, portions were retained for further consideration if they did not contain fatal flaws.

Selection of alternatives for detailed analysis involved the combining of the remaining feasible segments into full corridor options that would be carried forward for further analysis. In addition, an option of improving existing U.S. Route 220 to interstate standards was developed. These options are referred cumulatively as the Build Alternative. The Build Alternative has many options based on different segment combinations; for the purpose of analysis, four general options with several sub-options variations were selected for analysis in the DEIS. These options are representative of a range of combinations of segments that could be combined to form a Build Alternative. The Build Alternative along with the No-Build and TSM Alternatives were presented during a series of open forum citizen information meetings in May, June, and July 1998. There are many different methods for developing a range of reasonable alternatives when a seemingly infinite number of alternatives exist. FHWA does not prescribe a particular method. As long as a reasoned approach was used, then it is acceptable.

C)

1-73 DRAFT ENVIRONMENTAL IMPACT STATEMENT AND SECTION 4(f) EVALUATION and I-73 TECHNICAL MEMORANDA

- 1) Purpose and Need

According to Edward Sundra of FHWA, the Statement of Purpose and Need "is a problem statement and, as such, is only intended to identify the problem or deficiencies that the project seeks to address." (see Attachment D) The overarching problems described in the DEIS Purpose and Need are "economic, safety needs and transportation deficiencies of the study area." (1-5) j

To claim that "In designating I-73 as a high priority corridor in ISTEA, the Congressional intent of the route as an interstate facility was clear" (DEIS 1-1) is not evidenced or supported in any way other than FHWA and VDOT interpretation. The record shows that other states are building the roadway to other than interstate standards. The designation is for I-73 to be part of the National Highway System and that roadways included are often primary arterials. US Route 220 is currently part of the National Highway System as a low volume principal arterial, and if upgraded to the standards this designation represents, can adequately meet the stated purpose and need for

- improving safety on US Route 220;
- improving operations, access and capacity for movement of goods through the corridor; and
- enhancing general mobility and transportation linkage through the immediate ; region and broader travel shed.

Response: *The language regarding Congressional intent for an Interstate facility comes from the 1/22/99 electronic message to you from Mr. Fred Skaer, Director of FHWA's Office of National Environmental Policy Act Facilitation in Washington, D.C. Therefore, the basis for the conclusion is not VDOT or the FHWA Virginia Division Office, but the highest levels of FHWA management. Notwithstanding, the Fred Skaer electronic message and more importantly, the DEIS, clearly acknowledge the flexibility that states have in designing I-73 to non-interstate standards. For this reason, the draft EIS states that even though Congress has provided the states with flexibility, they have expressed their intent through legislation and have provided states with the legal mechanism to designate the route as part of the Interstate system should they meet the conditions in the legislation. Accordingly, the draft EIS identifies the Interstate design standard as the "preferred design alternative" for I-73 in Virginia in keeping with the documented purpose and need which includes congressional intent. Notwithstanding, the draft EIS further clarifies that the Interstate design is being used to assess impacts and compare alternatives for purposes of selecting a location, not a design; a worst-case scenario if you will. The actual design and design related features won't be approved until after final design which cannot be initiated under FHWA regulations until after a Record of Decision is issued.*

Finally, it needs to be pointed out that the designation 'urban or rural principle arterial' is the functional classification of the roadway. Roadways are designed to meet the functional classification. The 'interstate' classification is not a functional class of roadway. Instead, all Interstate facilities are functionally classified as principle arterials. Interstates are designed to principle arterial design standards.

As you acknowledge in your comment, any improvements to US Route 220 would need to be done to principle arterial standards. Although AASHTO has a separate design standard for roads classified as interstates, VDOT does not have a separate interstate design standard. Instead, interstates are covered by VDOT's "freeway" design standard which is a subcategory of the principal arterial design standard. The other subcategory is "other principal arterials". Both the "freeway" and "other principle arterials" design standard is further broken down into 'level', 'rolling', and 'mountainous' based upon the terrain where the facility would be located. This terrain-specific break down effects the design speed, maximum degree of curvature, and stopping sight distance; it is important to also point out that these terrain-specific standards are not design exceptions. However, the lane width, shoulder width, median width and clear zone width for both "freeways" and "other principal arterials", those design features that establish the direct impacts, are the same. This is depicted in Figure 2.3-1 of the draft EIS to demonstrate that there is no appreciable difference between the "freeway" profile (i.e. interstate) or the "other principal arterial" profile; both require a minimum right-of-way of 250 feet. As further documented in the draft EIS at page 2-13, whether I-73 is designed to freeway standards (i.e. interstate) or other

principal arterial standards, there does not appear to be any discriminating advantage or disadvantage, environmentally, between the two standards.

Your comment, along with similar comments made by others, have failed to demonstrate where an appreciable difference in impacts would occur if a non-freeway (or "other principle arterial") design standard was used. This would have to be done to make a case that there are other reasonable alternatives that have not been considered. Therefore, FHWA has not eliminated a wide range of feasible alternatives by basing the impact assessment on the principle arterial design standard for freeways. The impact of alternatives developed to "other principle arterial" design standards is adequately covered by the existing alternatives under consideration.

What is apparent from the information provided in the DEIS is that the Average Daily Traffic forecasts, forecast Levels of Service, and Congested Flow Speeds is that problems and deficiencies relating to the economic concerns stated are limited to specific locations along the US Route 220 corridor. The figures indicate that there are not actually problems in much of the corridor pertaining to ADT, LOS, or Congested Flow Speed and as is pointed out elsewhere in these comments the Travel Time Comparisons used to draw conclusions about alternative effectiveness are flawed and inaccurate. For example:

- According to Table 4.1-1 all but one of the routes and locations identified from Route 419 to South of Bassett Forks, the increase in ADT ranges from 100 to 800 only. The one exception to this minimal increase is for Route 40 East of Rocky Mount which is projected to increase by 2000 and at which location improvements are now being made. This is in direct conflict with a DEIS statement that *"Forecast traffic volumes on other roadways throughout the study area indicate acceptable future year peak hour conditions under all of the alternatives studied.(S-3)*
- For level of service changes, of the 28 routes and locations listed, 17 are expected to stay the same, three are expected to improve, and eight are expected to decrease under a No-Build Alternative. Five of those projected to decline are in the city of Roanoke, one is at Route 24, and two are east of Rocky Mount on Route 40 and Route 122.
- According to the DEIS, *"Future 2020 No-Build conditions indicate that travel speeds will remain constant to those currently experienced. This would be expected as once south of Roanoke, US Route 220 traffic volumes and LOS are anticipated to be similar to current conditions. **TSM improvements along US Route 220 would increase travel speeds along US Route 220"** (4.1-12)*

Even the information relating to the economic situation and forecasts do not adequately describe problems or needs to be addressed by 1-73:

- The figures cited in the DEIS (Tables 1.4-1 and 1.4-2) do little to describe the need or problem that exists relating to current economic conditions.
- Statements such as "several jurisdictions along the US Route 220 corridor experienced either modest growth or actual declines" (DEIS 1-8) does not meet a standard of data required to make any interpretations
- Statements such as "These (City of Martinsville and Henry County) have the greatest need for improved accessibility for economic stability and growth" are not founded in any actual data.
- Discussion of the changes in the manufacturing industry states, "A key element to maintaining existing jobs and to supporting the growth of the manufacturing industry in this area will be the ability to move supplies and products to and from other regions using a good transportation network in a safe, efficient and timely manner. " (DEIS 1010) There is no mention of other key elements of work force availability and skills nor is there any significant data presented to describe what constitutes a good transportation network.

US Route 220, a low volume primary arterial, already exists as a transportation link between the areas in the region.

Response: *The EIS does not tie economic concerns to level of service or congested travel times. As stated on page 1-5 of the DEIS, The cities, towns, and counties along US Route 220 have and continue to be constrained by the limited transportation access to major markets and suppliers; geometric conditions such as steep grades, poor site distances, uncontrolled access and dangerous cross-overs contribute to a safety problem which constrains freight dependent economic activity. In addition, regarding Tables 1.4-1 and 1.4-2, the EIS does not need to establish that there is a problem when it comes to economic development issues. For example, when the purpose and need statement identifies economic growth as a purpose of the project, it doesn't necessarily mean that there is a problem that needs to be corrected; it could mean that the area in question desires to improve upon its existing condition through economic development opportunities, whether that existing condition is considered to be a problem or not. As for work force availability and skills, the DEIS does acknowledge that an interstate facility is a tool that a locality could use to attract development, and the localities and business community have generally supported an interstate facility because of the potential associated with it. As already mentioned above, the corridor for I-73 was changed in 1994 at the request of the cities of Roanoke and Salem and the County of Roanoke because they saw its benefit as a tool to facilitate economic development. So, in December of 1994, VDOT prepared a supplemental report for I-73 that determined it feasible to refine the location of I-73 using I-581 and I-81. While improved transportation accessibility in a corridor may indeed make land more attractive for development, other factors such as water and sewer lines, quality of schools and other public services, work force availability, undevelopable land (e.g. wetlands, floodplains, parks, slope conditions, etc.), land acquisition and development costs, impact fees and zoning ordinances play major roles in shaping where development will take place, its nature and its intensity.*

We agree that an I-73 build alternative is not needed to address the traffic conditions at select points or at certain locations in the study area. However, there are multiple components to the purpose and need of the project, and one should not isolate a single component to make a case for need. This segment of I-73, while it has independent utility and has been developed to address the purpose and need that has been identified, must also be viewed in the context that it is just one segment of the high priority corridor identified by Congress running from Michigan to South Carolina.

2) Transportation System Management

The DEIS and associated Technical Memoranda fail to adequately and fairly discuss and assess the Transportation System Management alternative. This is evidenced by the following examples:

- *Alternatives and Screening Technical Memorandum (2-2) "Although the No-Build and TSM Alternative will receive equal consideration during the environmental analysis and in the DEIS, the remainder of this section will focus on the Build alternative options."*
- *DEIS Table S-1 has no TSM specific entries for *Reduction in Total Accidents* column of the *Traffic and Transportation* heading. DEIS Table 4.1-15 does not list a TSM specific entry in a Projected Accident, Injury and Fatality Comparison on US Route 220 (4.1-19). A footnote (S4) explains this by saying UTSM improvements would result in marginal but not significant accident reductions as US Route 220 remains the same functional class of roadway. " This is inaccurate. It is a fallacy to suggest that the class of roadway precludes reductions in accidents. The deficiencies cited for high accident rates on US Route 220 include the high number of crossovers and absence of left turning lanes (DEIS 1-7), deficiencies that are addressed by TSM:*

"Of the 34 TSM improvements, seven involve closing of median openings, five re-grade the roadway, 14 improve the sight distance along the roadway, four are minor roadway realignment work, three involve closing median openings and widening the median, and one involves a continuous two-way center left turn lane." (DEIS, page 4.1-18) |

If TSM improvements include crossover closings, addition of turning lanes and additional changes in behalf of safety, it is common sense that the accident rate would be reduced!* *The Traffic and Transportation Technical Memorandum states the*

following about proposed TSM improvements:

"The inclusion of a center turn lane has been shown to reduce the accident rate by more than 53 percent. The improvements to sight distance along the roadway also would help improve the safety for motorists traveling along US Route 220. Sight distance improvements along a roadway have been shown to reduce accident rates along roadways by up to 32 percent. Improvements to alignments of roadways have been shown to reduce the accident rate along the roadway by 34 percent" (5-49)

Omission of the result of TSM on forecast accident incidents constitutes bias against the TSM alternative.

* See public hearing comments (December 14,2000) by Steven Simon, EMT from Clearbrook stating that the accident rate on US Route 220 had decreased since the improvements made to the County line and with increased speed limit enforcement

Response: *Although accident reductions would be anticipated under the TSM Alternative, the estimate of 2020 occurrences for TSM cannot be determined using a correlation to the roadway functional classification statewide accident rate. This is due to the fact that the functional classification and the related statewide accident rate of U.S. Route 220 would not change with TSM improvements. The accident, injury and fatality rate would improve but would not change as substantially as the Build Alternative options. The Build Alternative represents a major upgrade in design and safety standards, which includes total access control, grade separated interchanges, grades not greater than 5 percent, and no median crossovers.*

Table S-4 – "Reduction in Total Accidents", the numbers in this column reflect the anticipated year 2020 reduction in total accidents on U.S. Route 220 with the new interstate over the No-Build condition. The following table lists the total anticipated accidents on U.S. Route 220 as well as the anticipated accident reductions with each Build Alternative Option.

PROJECTED ACCIDENT, INJURY, AND FATALITY COMPARISON ON EXISTING U.S. ROUTE 220

U.S. Route 220 – Route 419 to North Carolina State Line	1997	2020¹				
	Existing	No-Build / TSM	Option 1	Option 2	Option 3	Option 4
Accidents	278	410	360 (-50)	215 (-195)	155 (-255)	270 (-140)
Injuries	208	325	285 (-40)	170 (-155)	120 (-205)	215 (-110)
Fatalities	3	4	3 (-1)	2 (-2)	1 (-3)	3 (-1)

Sources: VDOT, Traffic Engineering Division, 1995 Summary of Crash Data, 1995. VDOT, Transportation Planning Division, 1995, 1996, 1997, Accident Summary and Accident Rate Information, U.S. Route 220 from SCL Roanoke to North Carolina State Line, June 1999.

Notes: 1. 360 (-50) = forecast # accidents, injuries, and fatalities (amount less than No-Build Alternative)

The Build Alternative would improve the safety of U. S. Route 220 by reducing the traffic traveling on the roadway and therefore, reduce the overall number of accidents in the corridor.

- The DEIS states that traffic volumes forecast for roadways in the study area under the TSM Alternative are anticipated to be similar to those forecast under the No-Build Alternative. Since the TSM Alternative would not have significant highway capacity or operational increases, the alternative would not attract additional traffic from other

roadways in the state to the study area as compared to the No-Build Alternative."(4.1-2) There is no information in the DEIS which supports this relegation of the TSM Alternative to non-status in the discussion of Average Daily Traffic (ADT) and Level of Service (LOS) forecasts for alternatives. This is negligent and misleading in that the TSM Alternative is described elsewhere as follows:

- Sight distance improvements and crossover elimination in selected locations on US 220 are included to enhance safety. (DEIS S-2)
- The intent of the TSM is to maximize the efficiency of the existing transportation system. (DEIS 2-21)
- TSM improvements along US Route 220 would increase travel speeds along existing US Route 220. (DEIS 4.1-13)

The *Traffic and Transportation Technical Memorandum* describes the TSM Alternative as follows: "Alternative improvements are limited to US Route 220 only and constitute a combination of safety improvements and minor capacity improvements. While these improvements would increase the safety of traveling existing US Route 220, only minor operational improvements would be expected from these safety and minor capacity improvements. These operational improvements would be in areas such as slightly increased traveling speeds and small amounts of additional traffic volume capacity at specific locations" (5-7).

In order to provide "equal consideration" of the TSM Alternative, the DEIS must include specific data and documentation to justify the omission of TSM in comparing forecast ADT volumes (Table 5.3-1) and peak hour LOS 2020 (Table 5.3-2) or else include comparable figures for TSM in these areas.*

The explanations that "since TSM improvements are designated for specified locations along US Route 220, not along the entire roadway, no significant change in travel patterns would result;" and since the TSM Alternative would not have significant highway or operational increases, the alternative would not attract additional traffic to the study area" are **unsubstantiated.*

- By stating "Traffic forecast for TSM is the same as the No-Build Alternative. As mentioned previously, the TSM Alternative does not propose any improvement on roadways other than US Route 220. As a result, the LOS along roadways in the study area are expected to be the same as those found under the No-Build Alternative" (DEIS 4.1-6), the DEIS implies that the Build Alternatives do, in fact, include improvements to other roadways which is not evidenced elsewhere in the document. This is misleading and biased against the TSM Alternative.
- In DEIS Tables 5.3-17 and 5.3-18, comparing vehicle miles and hours traveled, TSM is again included with No-Build even though the previous Table 5.3-16 indicates a significant difference in congested flow speed between No-Build and TSM. (TSM has consistently higher travel speeds supported in text (DEIS 5-2) "TSM improvements along US Route 220 would increase travel speeds along US Route 220.")
- In the narrative describing impacts on natural resources, the text states that "the potential introduction of invasive plant species exists under TSM Alternatives." (4.7-1) Yet under the comparable section for Build Alternatives there is no mention of the potential of introduction of invasive species. It is difficult to imagine the same possibility (perceived by the reader as a negative impact) exists.

These are but a sampling of the ways in which the DEIS does not accurately analyze or reflect the TSM Alternative and promotes Build Alternatives.

Response: *The TSM Alternative was evaluated in the I-73 Draft Environmental Impact Statement using the same range of criteria and level of detail as the build alternatives. Since the TSM Alternative would consist of low-cost improvements to the existing transportation system, would occur mostly within existing right-of-way, and would not increase capacity, impacts as well as costs and benefits for the TSM*

Alternative are not appreciably different from the No-Build Alternative. Where differences between the TSM alternative and the No-Build alternative existed, as in Table 4.1-11, the two were listed separately. Where differences were not discernable, the two were combined.

The comment that statements like, "since the TSM Alternative would not have significant highway or operational increases, the alternative would not attract additional traffic to the study area" are based on logic and common sense. We have not been provided any information that would lead us to conclude otherwise.

The TSM alternative also assumes that improvements programmed for other roadways in the area will be implemented just as the Build and No-Build Alternatives do.

The same statement regarding invasive species for the Build alternatives was made on page 4.7-3 of the DEIS.

3) Absence of Sufficient Data and Documentation

The DEIS presents analyses, interpretations and conclusions that are made without sufficient data and/or documentation as demonstrated by the following examples:

a) "Analysis of secondary growth for proposed 1-73 interchange locations...indicated that growth and development is anticipated in most of the interchange locations and that the indirect and cumulative impacts for any of the proposed Build Alternatives would be minimal." (DEIS S-8) The evaluative process arriving at this conclusion lacks clear evidence .

Acreage of developable and undevelopable land - within a one-mile radius -was quantified for each build option. Developable land was defined as that agricultural/ forest land not considered prime agricultural property or designated wetland. (4.12-2) From this quantification the following conclusion is drawn:

". .a significant amount of land is already planned for development within the proposed interchange locations. This **may be** an indication that growth in development is already indicated in these locations with or without the introduction of a new interstate facility.

Since growth in development is already planned in these areas, with or without an interstate facility, the secondary impacts from any of the proposed build options would be minimal." **Nothing provided in the DEIS via data or referenced research substantiates these statements.**

This analysis also fails to address secondary impacts at locations other than proposed interchanges.

Response: *It should be clarified that although between 24% and 39% of the land within one mile of the proposed interchanges is already planned for growth or development in the local comprehensive plans, this does not indicate that between 61% and 76% is undeveloped. Portions of the remainder of land are not planned for development because in some cases, it is already developed. For some proposed interchanges (example Route 117 interchange with segment 374), no land (0%) is planned for development because 100% of the land is already developed. In addition, many of the local comprehensive plans do not include I-73, so the conclusion that planned growth or development will occur in these locations without the Interstate facility is a sound conclusion since the localities have already planned for the changes in land use.*

In addition, interchange locations were determined to be the areas most likely to be subjected to secondary impacts as a result of this project if a Build Alternative was selected. It was further assumed that development around interchanges would not likely exceed one mile over the design year of the project. Finally, it was assumed that land currently zoned for public park and recreational use around interchanges would retain that land use and not change. Further, it was assumed that land currently

containing wetlands would be left undeveloped because of the difficulty with obtaining permits. These assumptions and approach were based on recommendations from the EPA as well as FHWA's guidelines which states that capacity improvements, additional interchanges and construction on new location generally have a greater potential for indirect effects than projects to upgrade existing facilities. Therefore, it should be noted that this approach represents a worst case scenario intended to capture all of the impacts associated with secondary development even though there is no guarantee that the area around interchanges and within one mile would completely develop.

Additional information regarding cumulative impacts have been included in the FEIS.

b) "The Build Alternative would generally enhance air quality by reducing containment levels in the region by diverting traffic from other study area roadways and by increasing average travel speed." (DEIS S-10, 4.3-3) **There is no data or research referenced to support such a claim, particularly in light of the vast variations among the many Build Alternatives and the obvious differences in their impacts.** (This claim also defies common reasoning!)

Response: Actually, the statement does not defy reasoning and is a summary of empirical evidence and experience. For example, emissions are a function of traffic volume, speed, and vehicle miles traveled. Generally, as speeds increase, emissions decrease until they bottom out and then begin increasing again. For example, a graph of the calculated CO emissions from MOBILE6 shows that higher emissions are calculated at lower speeds than at mid range speeds and the top range speed (60.7 mph for a freeway). At the top range speed the CO emissions are higher than the mid range speeds but do not exceed the lower range speed. Based on the graphical representation of the CO emissions, the highest emission factors would occur at the lower speed range of 2.5 to 30 mph. Graphs for volatile organic compounds, the precursors of ozone, are similar. Emissions decrease from 2.5 mph to about 55 mph before they bottom out and begin to increase. Emissions at 65 mph are still less than emissions at 35 mph and similar to emissions at 45 mph. Finally, air toxic emissions show a similar relationship with some differences. Emission-speed graphs developed from EPA's Mobile6 model show air toxic emissions dropping off significantly between 2.5 and 20 mph before assuming a more gradual decline from 20 mph to 62.5 mph and beyond.

Likewise, experience in complying with the Clean Air Act in nonattainment areas like Richmond, Hampton Roads and Washington D.C. demonstrates that despite forecasted increases in VMT and the number of vehicles on a regional transportation network, programmed roadway improvements will lead to a reduction in nitrogen oxides and volatile organic compounds emissions, the precursors of ozone, because the improvements improve average travel speed and reduce congestion. In addition, the inclusion of emission controls on vehicles also plays an important role in the overall reduction of emissions.

c) "The No-Build and TSM Alternatives would have no Section 4(f) involvement but these alternatives would not adequately address the purpose and need for the project." (DEIS S-12) The document fails to specifically substantiate in what ways the TSM Alternative does not provide

- ✓an improved transportation facility,
- ✓an effective and efficient roadway,
- ✓a safe and direct transportation link for business, and
- ✓a transportation facility to foster planned economic development.

The Purpose and Need described in the DEIS identifies Safety Issues, Economic Development Conditions, Freight Movement/Capacity/Access, Mobility and Linkage, and Study Corridor Planning Efforts as improvements or needs in the US Route 220 corridor.

Yet **the DEIS does not sufficiently report on how TSM will contribute to these.**

Response: First, the fact that the no-build alternative does not address the purpose and need of the project is intuitive. The case for the adequacy of the TSM Alternative to address the purpose and need

is made throughout the DEIS. Overall, since the TSM Alternative would consist of low-cost improvements to the existing transportation system and would occur mostly within existing right-of-way, benefits are not as substantial with this alternative compared to the build alternatives.

d) While the Parklands and Recreational Resources Technical Memorandum identifies existing parks and recreation areas within one mile of either side of the centerline of Build Alternatives(S-1, S-2), the only environmental consequences included are those affected as a result of property taking. The result is that only consequences to the Blue Ridge Parkway are discussed despite the fact that some of the identified parks are: (P&RRTM 3-9 to 3-12)

- Adjacent to a segment (Larc Ballfield, Harkrader Park)
- 50 feet from a segment (Southwest District Park)
- .10 miles from a segment (Mowles Spring Park, Washington Park)
- .32 miles from a segment (Blue Ridge Boxley Fields)
- .61 miles from a segment (Waid Recreation Area)

The DEIS should provide an assessment of the secondary and indirect impacts to these areas which are dependent on specific environmental factors and conditions to serve the public.

Response: *The discussion related to parklands and recreational areas, as discussed in the technical memorandum, was concerned with the larger issue of their Section 4(f) significance and direct use. Section 4(f) requires that FHWA may not approve the use of land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that there is no feasible and prudent alternative to the use of land from the property; and the action includes all possible planning to minimize harm to the property resulting from such use.*

A review of Figures 3.10-1 through 3 shows that many of the cited parks are located in an urbanized area adjacent to existing development, highly traveled roadways, and/or railroad tracks. Therefore, either there is limited area for secondary development to occur or the setting of the park has already been compromised by existing development and is not conducive to a quiet setting. In some cases, the parks themselves are significant for the recreational activity that they provide such as youth sports and as such, the qualities that make the park significant are not adversely affected by surrounding development. Finally, many of the parks are not located near new interchanges where secondary development will likely occur. For example, Harkrader Park and Washington Park are located in highly developed areas and near existing interchanges. Therefore, there is not much room for secondary development to occur and the setting of these parks are characterized by existing development. Southwest District Park is located in an area with some residential development and would be separated from segment 105 by a railroad facility. It would be located approximately two miles from the nearest interchange, so additional development in the vicinity of the park will likely be an extension of development pressures coming out of the City of Roanoke and not secondary development attributed to the project. Mowles Spring Park is located approximately four miles from the nearest proposed interchange; development that occurs in the vicinity of the park will likely be an extension of development coming out of the Cities of Salem and Roanoke and not secondary development attributable to the project. The LARC Ballfield is located a couple of miles from the nearest interchange and would not likely experience secondary development in its vicinity. Notwithstanding, the LARC Ballfield is significant for meeting the areas baseball needs, which is an activity that would not be adversely diminished by secondary development impacts to the setting of the ballfield. Both the Waid Recreation Area and Blue Ridge Park would be located within a mile of a proposed interchange which means that the potential for secondary development to occur in the vicinity of these parks is good should an alternative that uses segment 192A or 372 be selected, respectively. However, the setting of both of these resources includes the Norfolk/Southern Railroad line; in the case of the Waid Recreation Area, the railroad borders the park and would be located between the road and the park. In addition, both of these resources are significant for meeting the areas recreational needs and offer a variety of recreational opportunities, depending on the park, that include baseball, soccer, basketball, softball,

tennis, biking, and picnicking; there do not appear to be any specific environmental factors or conditions that are dependent upon setting that would make the two parks significant. Therefore, even though the area around these two parks may experience secondary development (which was accounted for in Table 4.12-1) if an alternative is selected that uses either segment 192A or 372, it is not anticipated that this secondary development will adversely impact the qualities (i.e. recreational opportunities) that make the parks significant. Additional information has been added to the FEIS regarding Section 4(f) constructive use.

e) The Origin-Destination Analysis and conclusions based on this analysis (*Traffic and Transportation Technical Memorandum 544, 7-1*) is inadequate and obtuse. The documentation is presented in percentages with no raw figures; there is no information provided indicating the times and frequency of the study; screening sites are described as "just north of Martinsville and south of Roanoke." (5-44) Origin-destination information has important applications for the economic development aspect of the I-73 project; more in depth and comprehensive studies should be included in the DEIS.

***Response:** *The raw numbers are large numbers and convention generally calls for percentages to make the comparisons more meaningful. The intent of the percentages is to give the reader the proportions of travelers originating inside and outside the study area and destined inside and outside the study area. The screen lines are drawn above and below significant geographic references in order to give the reader a sense of where travelers are coming from and going to. The accuracy of the screen line results would not change significantly with a more specific screen line geographic reference. The compelling inference with the origin destination information indicates a significant number of travelers come to the study area from other areas of the country and a significant number of travelers from the study area are destined for other areas of the country. This reinforces the Congressional intent for I-73 to serve interstate commerce needs from the Midwest to the coast of South Carolina.*

Related to this topic is the lack of adequate assessment of truck traffic on US Route 220. The only information is provided in Table 3.1-3 listing the percentage of trucks on selected routes. Further analysis is necessary to more adequately identify the volume of local, regional and interstate truck traffic. Further analysis is necessary to explain the fact that the percentage of truck is highest on US Route 220 near Sydnorsville and declines to the north on US Route 220 at 419 and to the south near the North Carolina state line.

Response: *Trucks comprise a high portion of U.S. 220 traffic because both through truck traffic and local truck traffic are using the same facility. An interstate facility would help separate the through traffic from the local traffic, which would improve safety. Even with an increase in total truck volumes that may occur due to economic growth, the percentage of truck traffic would likely be reduced for most of the major roadway facilities.*

Similarly, in the discussion of truck volumes (DEIS 3.1-4), there should be specific information presented about the businesses and manufacturing operations which are purported to contribute to the truck volume. The text contends that "several of the manufacturers in the study area's central and southern portions maintain manufacturing headquarters in the Piedmont Triad." More specific and comprehensive in depth information is needed if this discussion is to have any meaning and bearing on the I-73 study.

Response: *Manufacturers, assembly plants, transportation (freight) and warehouses were compiled from the Director of Data and Information Services for the Piedmont Triad Council of Governments and the North Carolina Employment Security Commission for Rockingham, Guilford and Randolph Counties. Montgomery, Richmond, Stokes, Forsyth, Davidson and Moore Counties are also likely to be impacted by I-73 but were excluded from the analysis as they are outside of the traditionally defined Triad area. For year 2004, the number of manufacturing, assembly and warehouse facilities and the combined facility employment for the three counties where the I-73 Corridor is physically located in the Triad area includes:*

County	Manufacturing	Wholesale Trade	Transportation & Warehousing	Combined Employment
Rockingham	114	73	57	66,580
Guilford	825	1336	355	18,945
Randolph	354	182	118	19,591
Totals	1293	1591	530	105,116

Economic development directors were contacted in six communities in Rockingham County; Eden, Madison, Mayadan, Reidsville, Stoneville and Wentworth. Madison and Mayadan did not respond. Among the communities of Reidsville, Stoneville and Wentworth; 150 manufacturing, assembly and warehousing firms were identified as potential I-73 users. Eden identified 9 firms that would use I-73.

Similarly, economic development directors were contacted in Guilford including Greensboro, Gibsonville, High Point, Jamestown, Oak Ridge, Pleasant Garden, Summerfield and Whitsett. Gibsonville, Jamestown, Oak Ridge, Pleasant Garden, Summerfield and Whitsett did not respond. Greensboro officials indicated all manufacturing, assembly and warehousing facilities would use I-73. High Point officials concluded similar economic sectors would likely use I-74.

Finally, economic development directors were contacted in Randolph County for Asheboro and Randleman. No responses were received from either community. In Randolph County, I-73 and I-74 are combined on the same alignment except in the north west sector of the county where I-74 bears off to the west. It is highly likely that most of the manufacturing, assembly and transportation warehousing sectors would use the combined I-73/I-74 facility as it is the only Interstate highway in Randolph County, it parallels existing U.S. 220 and it runs north south through the middle of the county capturing most of the developed travel shed.

The statement that "*The origin and destination link analysis confirms the Congressional goals for I-73 to serve as a new transportation facility linking ports in South Carolina to mid- west manufacturing and to the ports of the Great Lakes*"(DEIS 2-12) is conjecture and not warranted by any information or data presented.

f) The DEIS fails to describe the status of I-73 in other states, particularly those adjoining Virginia. This is particularly relevant in terms of the DEIS description of a "Congressional intent" for I-73 being built to interstate standards. It is significant that readers be informed that Ohio is not building I-73, that Michigan is aligning it on existing roadway, that West Virginia is not building I-73 to interstate standards, that the portion of US Route 220 in North Carolina to which I-73 in Virginia is planned connect does not meet interstate standards. (see attachments A & B)

Response: *I-73 is advancing in other states besides Virginia, and this information was included on page 1-2 of the DEIS. While Congress recognized and designated the I-73 corridor as a nationally significant facility, they did not identify or appropriate funding for the planning, design and construction of the facility. Consequently, some states have made more progress with I-73 than others due primarily to funding availability and priorities. As for interstate standards, the DEIS clearly acknowledges the flexibility afforded states in designing I-73 within their borders.*

In Michigan, the Michigan DOT completed a preliminary corridor feasibility study in June 2001. The study concluded that there is sufficient traffic to warrant a freeway/Interstate investment. Three feasible location alternatives were advanced in the feasibility study. Each of the three alternatives have been screened for environmental flaws and has the potential for further investigation. NEPA is the next step and the DOT will program that for later. For Michigan much of the corridor (approximately 80%) designated by Congress for I-73 is already freeway standard with limited access, grade separated interchanges and appropriate median widths for both urban and rural conditions. The existing freeway section of the corridor consists of I-75 and US Routes 27/127. There is funding allocated for

improvements to interchanges and the median along the existing I-75/US 27/127 corridor. The most difficult part to completing I-73 in Michigan is in the southeast part of the state where I-73 ties into Ohio.

In Ohio an I-73 toll feasibility study for the Turnpike Commission in Ohio has been completed. The results were not sufficiently strong enough to influence the Turnpike Commission to advance I-73 as a toll road at this time. The Ohio DOT has provided some I-73 components along the US Route 23 alignment, which is the I-73 corridor in Ohio. From Columbus to Michigan few improvements are planned or underway. North of Columbus a few grade separated interchanges are in the program. A limited access bypass was proposed for an area just north of Columbus but has not advanced. From Columbus south to Portsmouth, spot improvements, intersection improvements and safety items are advancing. In Portsmouth, Ohio a bypass along the west and north side is currently undergoing NEPA evaluation. This section ties into the I-73 corridor in West Virginia. Funding for the Portsmouth bypass was secured from the Appalachian Corridor Development Fund, the same source that has provided much of the funding for West Virginia's I-73.

In West Virginia, I-73, also known as King Coal Highway, generally follows existing US Route 52 from Williamson to Bluefield. Most of this corridor has been through the NEPA process. Most of this corridor has been designed and segments are currently under construction

In North Carolina approximately 60% of the I-73 corridor is Interstate or near Interstate standards. The current issue is funding. NCDOT has identified and programmed all of the I-73 segments within the state with the exception of a portion in Rockingham County. In areas where I-73 bypasses towns or cities and on large areas in Richmond, Montgomery, and Guilford, I-73 will occur on new location and be built to Interstate standards. The area of US 220 near the Virginia state line will remain as is until travel demand increases or Virginia's I-73 is completed. The intent along this section is to improve US Route 220 to near Interstate standards as demand and need warrant the improvement. VDOT's progress on I-73 to the Virginia North Carolina state line would heavily influence NCDOT's program for US Route 220 from NC Route 704 to the state line. The Interstate shield is in place on I-73 in North Carolina.

In South Carolina, a feasibility study has been completed and a broad corridor has been identified. Charleston has been replaced with Myrtle Beach as the preferred eastern terminus of I-73. A price tag of \$5.0 billion has been estimated in the feasibility study. Under H.R. 3550, "The Transportation Equity Act: A Legacy for Users", approved by the House Transportation Committee on March 24, 2004, South Carolina would receive \$10 million for the development of I-73. An effort is underway to designate I-73 as a project of regional and national significance so that it can be put among the top priorities to receive further funding. State officials believe that I-73 will boost tourism as well as economic development that will diversify the economy and create jobs. Nationally, the House approved a six year transportation bill that would obligate \$275 billion over six years for highway and transit programs on April 2, 2004. The bill must be reconciled in a conference committee with the \$318 billion version the Senate passed in February 2004. The amount of money attached to the bill in its final form could determine how quickly I-73 gets built. The South Carolina DOT is moving ahead with the NEPA process and is scheduled to finish the Final Environmental Impact Statement (FEIS) before the end of 2007.

On February 11, 2005 the South Carolina Director of Transportation, South Carolina DOT Commission Chairman, North Carolina Secretary of Transportation and North Carolina Transportation Board Chairman agreed to an interstate compact which facilitates the I-73 connection between the two states. The agreement provides for a new connection west of I-95, utilizing SC Route 38. The agreement also allows the South Carolina DOT to advance the environmental documentation for I-73 west of I-95 which was on hold until both states agreed to the SC Route 38 connection.

- g) In a summary of community facilities and services (DEIS S-8) the text states:
"Build Alternative options to the east and west of US Route 220 promote greater

access to service areas, particularly when service providers have mutual agreements across jurisdictional boundaries. **In general**, Build Alternative Options would improve access to parts of the study area sensed by proposed interchanges."

Discussion of land use and Build Alternatives, however, does not support the sense of improvement implied by the "in general" phrase. Option 3 and its variations are described as increasing response times and reducing access (DEIS 4.2-4) Option 4 involves changes during "certain times of the day." In fact, the range of the discussion about public facilities is confusing at best and it would be difficult without more detailed study to predict more accurately the impacts on access and response times. Statements such as "*Response times may improve when responding to emergencies in and around Roanoke County, but would otherwise remain the same or decrease due to the new access roads*" (DEIS 4.2 4) are indicative of statements in this section that simply do not make sense and are more confusing than helpful in assessing actual impacts.

h) The DEIS fails to integrate the impact of 1-74 adequately into the ADT forecasts. Appendix B of the Traffic and Transportation Technical Memorandum discusses the "Impacts on Volumes with Inclusion of 1-74 Analysis". There is no explanation as to why this analysis is not integrated into the ADT material presented in the DEIS. It is puzzling as to why this analysis appears in the Technical Memorandum but is not even referenced in the DEIS. It changes the ADT forecasts. Given that 1-74 is a reality (see attachment C), this data should be considered and used for evaluative purposes in the DEIS.

Response: *1-74 is a proposed interstate extension from Cincinnati, Ohio to South Carolina. In Virginia, 1-74 would follow I-77 for its entire length but will not be signed 1-74 until West Virginia completes its portion. Because 1-74 would follow I-77, it lies outside of the study area. The impact of 1-74 traffic on the roads that travel into and out of the study area was considered in the traffic analysis.*

i) A cost-benefit analysis is essential for a fair, prudent, and responsible assessment of the impacts of proposed 1-73 alternatives. According to the DEIS, a benefit-cost analysis was not conducted for this project since it is not a requirement under FHWA's NEPA guidelines. *Such an analysis is complicated by extensive financial assumptions and economic behavioral conditions implicit in the identification of costs and benefits. ...indirect and cumulative benefits and costs are difficult to quantify and subject to academic and economic interpretation.*" (S-13) This reasoning is irresponsible and makes no sense. **If the 1-73 project is defined in large part by the need for economic development, it is the charge of this study to provide credible documentation via sound research from which informed, intelligent and responsible conclusions can be drawn.**

(The economic research cited in the DEIS (2-9) is insufficient and of dubious application. The VEC study of 1994 was, by its own acknowledgement, limited in scope and completed under severe time constraints. The *TransAmerica Corridor Feasibility Study* is not a source of original and applicable research, but rests on analyses similar to the ones in the 1-73 study that are of questionable relevance (ADT, LOS, Travel Time, etc.). Professor David Hartgen's research, referenced in the 1-73 DEIS (5-2), has found that new four-lane roads do not bring jobs to rural areas

Response: *As stated in the draft EIS, an interstate facility is a tool that a locality could use to attract development, and the localities and business community have generally supported an interstate facility because of the potential associated with it. As documented above, in March of 1994, after VDOT completed the feasibility study to determine the general location of Interstate 73 in the state, the Commonwealth Transportation Board selected a proposed location for the I-73 corridor that entered Virginia from West Virginia on Route 460 west of Narrows, and which generally followed Routes 460 and 220 to the North Carolina State line. However, in late 1994, the cities of Roanoke and Salem and the County of Roanoke expressed a desire that the location of I-73 be improved by routing it along I-581 and I-81 because they saw its benefit as a tool to facilitate economic development. In December of 1994,*

VDOT prepared a supplemental report for I-73 that determined it feasible to refine the location of I-73 using I-581 and I-81. The CTB approved the revised location and with the passage of the NHS Designation Act of 1995, Congress included the CTB-approved corridor for Interstate 73 in legislation which was the impetus for the draft EIS.

As referenced in the draft EIS, the TransAmerica Feasibility Study demonstrated that interstate facilities have a greater magnitude of economic development potential than other types of facilities, so there is some application to I-73. While improved transportation accessibility in a corridor may indeed make land more attractive for development, other factors such as water and sewer lines, quality of schools and other public services, undevelopable land (e.g. wetlands, floodplains, parks, slope conditions, etc.), land acquisition and development costs, impact fees and zoning ordinances play major roles in shaping where development will take place, its nature and its intensity. It is acknowledged that the ratio of benefits to costs will be lower in rural areas and that there will be a diminishing rate of return simply because the factors mentioned above that are necessary for development are not as prevalent. Because the benefit-cost ratio, in part, is a factor of the amount of traffic that a facility will carry and the extent to which there is a supporting infrastructure in place, the cost to make rural areas more attractive to development will be intuitively greater, offsetting the benefits provided. The benefit-cost analysis prepared for the preferred alternative reinforces this logic. However, using the standards that this type of analysis demands, the benefit-cost ratio is still greater than one.

Despite FHWA's reservations about cost-benefit analyses, one has been prepared for the preferred alternative, and this information has been included in the FEIS. Basically, the results of this analysis demonstrate that the benefit-cost of the facility in rural areas will be much lower than the benefit-cost of the facility in developed areas. This follows logically because traffic is greater in developed areas and it has the supporting infrastructure and population to more readily accommodate economic development than rural areas do. Therefore, the benefits are greater. Specifically, the benefit-cost analysis evaluated the direct user and non-user benefits and compared these benefits to the capital and operating costs of I-73 over 30 years. Direct user and non-user benefits include travel time savings, reductions in crashed, decline in vehicle operating costs, agency cost reductions and a diminishing of pollution costs. Capital costs include engineering, construction, environmental mitigation, and right-of-way elements. Operating costs include the cost of maintenance and minor repairs to the facility over time. The benefit-cost analysis indicates that the alternative selected by the CTB exhibits a positive net present value with benefits that exceed cost for all discount rates less than 6.6%. The 30-year Treasury bond yield on bonds sold in November 2004 by comparison was 4.84%.

4) Errors and Inaccuracies

The DEIS contains many errors and inaccuracies that diminish the credibility of its contents as shown by the following examples:

a) According to the DEIS, "Projected 1-73 ADT volumes for the Build Alternatives **vary slightly** between the four proposed alignment options."(DEIS S-3) Table 4.1-2, however, shows that the variances are significant:

	Option 1	Option 2
US Route 450 to Route 122	12,900	37,100
Route 122 to Route 40	12,600	30,600
	Option 3	Option 4
Route 57/US Route 58 to NC state line	16,500	32,900

Generalized statements that seemingly conflict with the figures presented in the DEIS reduce the credibility of the document.

Response: *The statement will be changed to address your concern and more accurately represent the forecasted differences between alternatives.*

b) There are several discrepancies in the *DEIS and Technical Memoranda* as to the 1-73 corridor through other states. The National Highway System "priority corridor" is described as:

- going from Charleston, South Carolina to Portsmouth, Ohio (DEIS S-1)
- linking Charleston, South Carolina with Sault Ste. Marie, Michigan (DEIS 1-1)
- extending between Sault Ste Marie, Michigan and Myrtle Beach, South Carolina (P&RRTM 2-1)
- connecting Detroit, Michigan and Charleston, South Carolina (AI&STM 1-1)

Information in the DEIS needs to be accurate and consistent. Discrepancies such as these are confusing and reflect lack of thoroughness.

Response: *If the references are viewed within their context, then there is no discrepancy. For example, the EIS references do not create a discrepancy. The second EIS reference is clearly identified as the limits of I-73 that Congress designated for future inclusion into the Interstate system. In contrast, the first EIS reference speaks to the designation of I-73 as a high priority corridor and the termini initially established by Congress.*

c) In a summary of visual impacts (DEIS S-10), it is stated that options having the greatest potential for extent of visual impact (negative) are Options 1 and 1a; and options having the lowest potential for extent of visual impact are Options 2, 2a, and 2c. According to the Tables in the Visual Quality Technical Memorandum (4.4 -1 through 4.4-11) this is inaccurate.

Option 1:	-204 (total score)
Option 1a:	-290 (total score)
Option 2:	-208 (total score)
Option 2a:	-247 (total score)
Option 2c:	-208 (total score)

If summary assessments are not actual reflections of the data, the credibility of the DEIS is compromised.

Response: *Your comment is taken out of context. The statement from page S-10 is, "the options that have the greatest potential for extent of visual impact **on national and regional scenic resources (National Parks)**, are Options 1 and 1a..." Your citation to the tables in the Visual Quality Technical Memorandum are for the entire alignment and represents an apples to oranges comparison. The statement on page S-10 is correct and supported by the data in the DEIS.*

d) The travel time forecast and analysis under the Build Alternative are flawed and should be redone or replaced. According to the DEIS, "*the analysis under the Build condition assumes a completed 1-73 roadway facility from Michigan to Charleston, South Carolina.*" (4.1-12)
Until there is verification that other states are committed to completing their portions of the roadway, this approach is totally without merit. Even the comparisons made based on this assumption are without merit given there a single time estimate for the Build Alternative. Given that the Build options vary in length by as much as 15 miles (Table S-1), comparisons noting savings time in minutes cannot be substantiated.

The DEIS identifies several assumptions made for the development of travel forecasts for the 1-73 Location Study. The assumption that the 1-73 facility is complete from Sault St. Marie, Michigan to Myrtle Beach, South Carolina jeopardizes the integrity of all the forecast data in light of the known status of 1-73 in other states.

Response: *I-73 in Virginia between the City of Roanoke and the Virginia/North Carolina is being studied, in part, within the overall context of the I-73 high priority corridor designated by Congress from Michigan to South Carolina. Therefore, it is appropriate to consider travel times for the entire corridor. In addition, given the status of I-73 as provided in the response above, that information reinforces the consideration of travel time estimates.*

e) In discussing safety issues on US Route 220 and VDOT plans for improvements, the following is stated: *"Despite these minor safety improvements, accidents will continue to be an issue on US Route 220 because of the increasing volume of traffic, the high percentage of trucks, and the overall geometrics, which fail to meet current design standards."* (DEIS 3.1-8)

The incidence of accidents on US Route 220 involving trucks is not documented in the DEIS. And, according to the forecast ADT volumes, increases in the volume of traffic is specific to limited segments of US Route 220 and increases along major portions of the roadway are slight even with the No Build Alternative:

	Existing	2020
US Route 220 - South of Boones Mill	27,100	27,200
US Route 220 - South of Rocky Mount	17,500	18,100
US Route 220 - South of Sydnorsville	19,600	19,800
US Route 220 - South of Franklin County	21,400	21,700
US Route 220 - South of Bassett Forks	20,400	20,700

Response: *The fact that increases in traffic is specific to limited segments and that increases along portions of the roadway are slight is acknowledged in the DEIS.*

DEFICIENCIES TO BE ADDRESSED:

- 1) Purpose and Need for the Project is inadequate and prejudicial.
- 2) The Transportation System Management alternative is inadequately and unfairly represented. Bias in favor of build alternatives is evidenced.
- 3) Analysis, conclusions and interpretations throughout the DEIS are based on incomplete and insufficient data and/or documentation.
- 3) The DEIS contains errors, inaccuracies and unsubstantiated statements which significantly impact conclusions, interpretations, and eventual recommendations.

PUBLIC INVOLVEMENT

1) Stakeholder Interviews: Of the 67 stakeholders identified only five were women. Of the 48 listed with an affiliation (supplemented by personal knowledge of the affiliations of those listed), seven were elected officials, seven were local government employees, 23 represented corporate or business interests, one was a clergyperson, three were affiliated with non-profit organizations, two were civic group representatives, one a park service representative, one an educational institution business manager. Underrepresented were the farming and agricultural sector, the educational sector, the human service sector, religious leadership and the environmental sector of communities all of whom have an important "stake" in the future of our region.

Response: *Comment on the stakeholder interviews is noted. It is also noted that all individuals, regardless of sex, race, national origin, affiliation, occupation, etc. were provided several opportunities to make their views known through the scoping process and the public hearing process.*

2) 1994 Public Participation: As described above, the selection of Corridor 6B did not allow for public comment or public involvement. While outside the NEPA process mandating public

participation according to prescribed regulations, the process of Corridor selection feigned the importance of public support in corridor selection. It is a miscarriage of the public trust to bypass public input in a matter of this magnitude that has such momentous repercussions for communities and citizens.

Response: *The above issue refers to the 1994 Corridor Location Study for Interstate 73 Through Virginia. The responses in this document only address comments on the October 2000 Draft Environmental Impact Statement and Section 4(f) Evaluation. See the response above regarding the 1994 Corridor Location Study and the requirements of NEPA and public involvement.*

3) Timing of Public Hearings: The Location Study has been underway for nearly three years. The public was initially advised not to form opinions about the 1-73 project until the DEIS was completed at which time citizens would have an opportunity to reap the benefits of detailed and far-reaching studies of alternatives for deliberation. The decision to conduct public information meetings/public hearings two weeks prior to what is generally acknowledged to be the busiest and most hectic time for citizens in terms of the holiday season (between Thanksgiving and Christmas) represents significant disregard for the public participation process.

4) Comment Period: The expectation that the general public can adequately review and evaluate the hundreds of pages of commentary and research of the DEIS and associated Technical Memoranda in a 45 day comment period directly in the middle of the holiday period is unrealistic and fails to respect the values of family, community and spiritual celebration this time of year endorses. The fact that the DEIS has been in the making for such a long time makes it difficult to reconcile the adherence to a minimal comment period with the enormity of the project and the material to be digested. There is a sense of unfairness and manipulation in such a restrictive comment period.

Response: *This response applies to number three and four above. Documents were available for review on November 9, 2000. The comment period was open until January 12, 2001, giving interested parties over 60 days to review and comment on the document. This is 30 days above and beyond the 30-day regulation comment period.*

DEFICIENCIES TO BE ADDRESSED:

- 1) Stakeholder identification and interviews are not representative of the study area I community.
- 2) Citizen information meetings of 1994 do not adequately meet requirements for public participation.
- 3) The scheduling of public hearings impeded citizen participation.
- 4) The length and timing of public comment period on the DEIS have been insufficient and constitute unfairness and hardship on the public.

Bier / 1-73 Location Study Comments
January 3, 2000

page 16

(E)

TRANSPORTATION POLICY

The 1-73 Location Study has failed to consider reasonable alternatives for the 1-73 project.

According to VDOT Commissioner Nottingham, "*Outside of the Transportation System Management (TSM) alternative, low build or intermediate build alternatives that evaluated the feasibility of providing a principal arterial with a 60 mph design speed were explored.*"

(see Attachment E) He concludes this correspondence by saying, "*the use of a lesser design standard for 1-73 does not address the purpose and need for 1-73 as identified in the Draft Environmental Impact Statement.*" The fact that VDOT chose not to explore low build or intermediate build alternatives to the extent that TSM and Build Alternatives have been studied is a clear failure to consider reasonable alternatives. There is no documentation offered as to what how these possible alternatives were "explored", nor is there any documentation to support the claim that such alternatives would not address the purpose

and need. The only way to arrive at this later conclusion is to study these alternatives to the same extent as the TSM and Build Alternatives were studied.

DEFICIENCY TO BE ADDRESSED:

1) The I-73 Location Study fails to consider reasonable alternatives.

Response: *To address the Purpose and Need for I-73, a broad range of options were considered and evaluated. Over 750 Interstate segments and other alternatives were developed for the Study using input from local jurisdictions, public meeting participants, stakeholder interviews, and input from the I-73 Location Study Team. Key alternative evaluation criteria included the ability to connect I-73 through Virginia, to address safety, to support economic development, and enhance access, mobility, linkage and capacity in the region. Other screening criteria evaluated impacts on archaeological and historic resources, wetlands, threatened and endangered species, prime farmlands, existing and future land uses and suitability for Interstate development. The process resulted in three core alternatives: 1) No-Build, 2) Transportation System Management (TSM) and 3) New Interstate I-73 (Build) Alternative.*

Other alternatives that were suggested during the scoping process and comments on other alternatives submitted in response to the DEIS have been addressed in the FEIS.

The TSM Alternative wasn't necessarily studied in the DEIS because of its ability to address the purpose and need for the project. Instead, it was included because of FHWA guidance. Had the TSM Alternative been subjected to a determination of whether it was a reasonable alternative under NEPA (i.e. effective in addressing the purpose and need), then it likely would not have been carried forward. FHWA has started taking this step recently instead of just carrying a TSM alternative forward for consideration because their guidance suggests it. For the Tri-County Parkway EIS in Northern Virginia, the TSM Alternative was not carried forward because it was not effective in addressing the purpose and need and was eliminated from further consideration. Based on this explanation, consideration of a TSM Alternative doesn't mean that low build or intermediate build alternatives should have been considered to the same level of detail.

Botetourt County, Virginia

Office of the County Administrator

January 9, 2001

Mr. Fred C. Altizer, Jr.
District Administrator
Virginia Department of Transportation
P.O. Box 3071
Salem, VA 24153-0560

RE: I-73 Draft Environmental Impact Statement

Dear Mr. Altizer:

This letter constitutes Botetourt County's comments on the 1-73 Draft Environmental Impact Statement and Section 4(f) Evaluation. It is based upon a resolution unanimously adopted by the Botetourt County Board of Supervisors on December 19, 2000, in opposition to any routing (and specifically the designated Option 1) of the proposed 1-73 in Botetourt County. A copy of the resolution is attached.

Botetourt County's opposition is based upon the following:

1. The proposed 1-73 Option 1 routing is inconsistent with the Botetourt County Comprehensive Plan. In fact, this routing traverses areas primarily designated as agricultural and rural residential. An intense use such as an interstate highway will destroy years of planned development and a way of life for residents who have chosen to locate there based upon the County's Comprehensive Plan.

Response: *The DEIS acknowledges in Table 4.2-9 that Options 1 is not compatible with the Botetourt County's Comprehensive Plan. It is also noted that the Botetourt County Planning Staff and the Botetourt County Board of Supervisors have gone on record opposing any alternative through the county. These issues will be considered in the decision making process.*

2. Because of the planned low intensity land uses in the Option 1 corridor area, Botetourt County has not invested in public infrastructure necessary to accommodate growth that would result from interstate development. The County's "Southern Botetourt County Water and Sewer Study" provides for construction of only such systems as are necessary to address public health concerns such as failing septic systems.

Response: *If Option 1 is selected, there is no requirement by Botetourt County to invest in public infrastructure to accommodate potential growth that may result from interstate development. The amount and type of development and the ability to serve this area can be controlled by locally adopted zoning regulations and ordinances.*

3. Option 1 is clearly not as efficient as other options identified in the Draft EIS in that it routes southbound traffic (in particular) substantially longer distances. If an interstate option is selected and is to promote economic development as has been often stated by VDOT officials, it should be designed to transport goods and services quickly and efficiently.

Response: *Each option has advantages and disadvantages related to their alignment. While it is true that southbound traffic would be required to travel a longer distance than the other options, the impacts are less for other factors such as displacements and proximity to hazardous materials. All the potential impacts will be considered in the evaluation process.*

4. Option 1 would likely result in additional traffic being routed through Exit 150 of Interstate 81. Some of that traffic would exit there to avail itself of the service cluster in place. That additional traffic would exacerbate the well-documented and often-mentioned congestion at that interchange.

Response: *Under Option 1, additional traffic would be forecast to travel through the I-81 Exit 150 Interchange. If this alternative is selected as the preferred alternative, the amount of traffic that would avail itself of the local roadway services under this alternative would be further investigated and be identified. The interchange itself would be designed to acceptably accommodate potential traffic flows to and from I-81 to I-73 and US 220. The inclusion of a limited access highway facility in this area south of I-81 is actually forecast to reduce traffic volumes along existing US 220 south of I-81 to below existing levels.*

To further illustrate our concerns about the potential routing of 1-73 through Botetourt County, the Board of Supervisors commissioned Finkbeiner, Pettis & Strout, Inc., Consulting Engineers, to review and comment on the Draft EIS. Their review is attached and should be considered part of Botetourt County's comments.

The traffic, land use, social consequences, economic consequences, farm and forest consequences, impacts on adopted goals, water quality, natural resources and parklands concerns noted in their review further elaborate on Botetourt County's opposition to Option 1 and any routing of 1-73 in Botetourt County.

In my 25 years of local government service, I have never witnessed such a unanimity of opposition to a proposed project as that evidenced by the citizens of Botetourt County and the governing body. We respectfully ask that you and the members of the Commonwealth Transportation Board not support Option 1 or any other routing of 1-73 in Botetourt County.

Sincerely,

Gerald A. Burgess
County Administrator

Enclosure

cc w/encl:

Ms. Lorinda Lionberger	The Honorable Bob Goodlatte
Ms. Shirley J. Ybarra	The Honorable Malfourd Trumbo
Mr. Charles D. Nottingham	The Honorable Richard Cranwell
Mr. Leo J. Bevon	The Honorable Lacey E. Putney
Mr. Roy P. Byrd	The Honorable Creigh Deeds
Mr. S. Grey Folks, Jr.	Blue Ridge Concerned Citizens
Mr. John H. Grubb, Jr.	Mr. Jeff Echols, VDOT Res. Eng.
Mr. Benjamin Humphreys, Jr.	Mr. William G. Loope
Mr. J. Kenneth Klinge	Mr. Stephen P. Clinton
Mr. Bryan E. Kornblau	Mrs. Wanda C. Wingo
Mr. L. C. Martin	Mrs. Bonnie B. Mayo
Mr. Leonard S. Mitchel	Mr. Terry L. Austin
Mr. H. Carter Myers, III	Members, Botetourt County Plan-
Mr. Gary Walker	ning Commission
Mr. William Prettyman	Members, Botetourt County
Ms. Olivia A. Welsh	Transportation Safety Comm.
Mr. Ulysses X. White	Botetourt Co. Chamber of Comm.

FINKBEINER, PETTIS & STROUT, INC.

January 8, 2001

Mr. Gerald A. Burgess
County Administrator
County of Botetourt
1 West Main Street, Number 1
Fincastle, VA 24090

Re: Botetourt County, Virginia
I 73 Location Study
Draft Environmental Impact Statement
& Section 4(f) Evaluation

Dear Mr. Burgess:

Finkbeiner, Pettis & Strout, Inc. (FPS) has completed review of the above referenced document as requested by Botetourt County. The following paragraphs discuss our observations, conclusions and recommendations.

General

Although there are four specific build options, plus a Transportation Systems Management option and a no build option, the determination of impacts is very broad brush for all of these alternatives. The proposed mitigation measures for any of the identified impacts are also very vague. In fact, the document states that specific mitigation measures will not be addressed, in most cases, until a preferred alternative is selected by the Virginia Commonwealth Transportation Board (CTB).

We understand that this is a very large project that covers a significant area. However, how well an impact can be mitigated should be considered in the selection of the preferred alternative.

It is our opinion that all mitigation measures should be addressed before an alternative is selected. Therefore, the document should address the Environmental consequences and mitigation measures in more detail for all of the alternatives. It needs to give, at the least, some indication as to how well the anticipated impacts can be mitigated; what measures might be used to accomplish the mitigation; and these factors should be considered in the selection of a route.

Response: *Without a more defined alignment and consideration of design, it is difficult to identify suitable mitigation measures. A more accurate assessment of appropriate measures based on location and design can be more appropriately addressed during final design.*

The document addresses numerous issues from traffic volumes to irreversible commitment of resources. Our comments primarily address some of the more critical issues in Chapter 4.0 Environmental Consequences. These comments are focused on Option 1, which is the route that would be located in Botetourt County.

Traffic

The discussion of traffic does not address the fact that the Option 1 Level of Service (LOS) on sections of I-581, US 220 and SR 40 will be less than the 1997 baseline LOS. Additional vehicle volume will be generated on these sections of highway and some improvements will obviously be needed to them if Option 1 were selected. Mention of this or the potential impacts of this additional construction should be included in the document.

Response: *Under Option 1, the level of service (LOS) on some sections of I-581, US 220 and SR 40 does degrade as compared to 1997 baseline conditions. It should be noted though, that the forecast 2020 No-Build condition also degrades in these sections as compared to the 1997 baseline conditions. In fact, some of these same sections are forecast to have a worse LOS under the 2020 No-Build condition as compared to the operating conditions forecast under Option 1. The analysis used in the DEIS compares the forecast operating conditions under a build alternative to conditions forecast in a No-Build condition. This is a standard analysis procedure. Operating conditions improve as compared to No-Build and acceptable (LOS D or better) at three of the four segments analyzed. US 220 segments are forecast to operate at a LOS equal to that expected under the No-Build condition. South of Roanoke, these operating conditions are similar to those experienced in 1997. US 40 is also forecast to operate at a LOS equal to that anticipated under the No-Build condition. If selected as a recommended alternative, a more thorough analysis of these sections of roadway, including the heavily traveled sections of I-581 through downtown Roanoke, would occur to identify potential improvements to these roadways.*

Land Use

The issue of land use and how it will be affected by the construction of I-73 is not adequately addressed. The document merely states the number of acres of various types of land use that will be transferred from existing to transportation land use. It does not address the type or amount of development that inevitably follows the construction of interstate highway facilities. Reference is made to one study prepared by the Virginia Employment Commission and to another study prepared by the Virginia Transportation Research Council regarding economic development. However, these studies are also broad brushed in their analysis. Specific analysis of land use changes and the resultant impacts, at least at the proposed interchanges, should be included. This is especially important since the Botetourt County Comprehensive Plan does not contemplate high intensity development along the Option 1 corridor.

Response: *To evaluate the potential secondary effects from the proposed alternative build options, a one-mile radius was used at each interchange to compare the existing development with planned growth. This information is provided in section 4.12.1 (Land Use Related Secondary Impacts) of the document. If Option 1 is selected, there is no requirement by Botetourt County to invest in public infrastructure to accommodate potential growth that may result from interstate development. The amount and type of development and the ability to serve this area can be controlled by locally adopted zoning regulations and ordinances.*

Social Consequences

The document reports that 340 residents and 3 non-profit organizations would have to be relocated if Option 1 were selected. It also indicates that the route runs through four areas of concentrations of development but "avoids the greatest concentration of development thus minimizing the potential loss of cohesion". The only mitigation measure offered is the VDOT right of way acquisition and relocation program. This is a federal standard approach to purchasing right of way. The document should address whether or not people are willing to be uprooted, even if they receive "fair market value" and relocation assistance. Admittedly, the common good must be considered in these situations, but the document should address the positions of the 341 residents who would be impacted. No measure of the individual impacts has been included.

Response: *Public comments have been received by citizens who maybe directly or indirectly impacted by any of the alternatives being considered for implementation. Maps were provided at each public meeting and staff was available to help individuals locate where their property falls within the build alternative right-of-way. Comments from citizens are being reviewed and will be documented as part of the FEIS.*

Economic Consequences

The document reports that Option 1 would relocate the fewest number of businesses and provide access to the least number of activity centers. Economic consequences and land use impacts are closely related. This section of the report should address changes in existing land use that will be spurred by the construction of an interstate facility.

These changes will produce economic activity, which is not desired by Botetourt County along the Option 1 corridor.

Response: *To evaluate the potential secondary effects from the proposed alternative build options, a one-mile radius was used at each interchange to compare the existing development with planned growth. This information is provided in section 4.12.1 (Land Use Related Secondary Impacts) of the DEIS. If Option 1 is selected, there is no requirement by Botetourt County to invest in public infrastructure to accommodate potential growth that may result from interstate development. The amount and type of development and the ability to serve this area can be controlled by locally adopted zoning regulations and ordinances.*

Farm and Forest Consequences

Merely stating the quantity of farm and forestlands that will be lost is not stating the complete impact. The document should define the effects of converting these lands from their current use to transportation use.

Response: *In addition to the quantity of farmland loss, farmland production value lost is also provided. Although information was provided regarding timber production in Chapter 3, Affected Environment, the economic impact from the loss of forestland was not discussed in the DEIS.*

The market valuation of timber is subject to soil conditions, tree cover and mix (hardwoods vs pine), access to the site and ultimate use (saw wood, chip and saw or pulp wood). Interviews with various foresters and state officials discouraged the application of an average timber value per acre approach. The "Timber Mart South" a publication of the Center for Forest Business, Warnell School of Forest Resources at the University of Georgia, in Athens, Georgia is useful and considered a respected resource by professional foresters. The "Press Release" for the 3rd Quarter of 2004, Timber Mart South, provides timber pricing for the "south-wide" or southeastern portion of the United States. This report does not break out the data for the I-73 Study Area or all of Virginia, for that matter. The quarterly report does provide a wealth of data, however, average prices are given in US \$/ton instead of per acre. Other data is grouped by timber that is sold by the cord, ton or board foot.

The report does provide an average for timberland transactions however, which was listed as \$960/Acre for the Southeastern United States. This number is for land and mixed timber. Several of the professional foresters that we contacted referred to "Timber Mart South" as a very reputable source for information and the only "average prices" they would feel comfortable including in this type of report.

One professional elaborated on the use of such an estimate, stating that he would recommend Timber Mart South to provide a historical reference, but he would not use it for current pricing.

Adopted Goals and Policies

The document does indicate very well that the Botetourt County Planning Staff and the Botetourt County Board of Supervisors oppose any alternative for I-73 in Botetourt County. In addition, the proposed route in Botetourt County is inconsistent with the County's Comprehensive Plan. The document should acknowledge this formal opposition and conflict with the Comprehensive Plan.

Response: *The DEIS acknowledges in Section 3.2.8 and 4.2.6 (Adopted Goals and Policies) that Options 1 is not compatible with the Botetourt County's Comprehensive Plan. It is also noted that the Botetourt County Planning Staff and the Botetourt County Board of Supervisors have gone on record opposing any alternative through the county. This position is clearly stated in section 3.2.8 in the FEIS.*

Air Quality

The document does not go into much detail regarding air quality, other than to indicate "All predicted concentrations are below the applicable Federal and State Standards". Only carbon monoxide is evaluated. There is some minor explanation regarding other pollutants. The study does state that further analysis may be required and it should be accomplished.

Response: *In July 1997, EPA updated the 1-hour O3 standard (0.12ppm, measured in hourly readings) to an 8-hr standard (0.08ppm, averaged over eight hours). This change reflects the results of many health studies. These studies have indicated that health effects resulting from O3 exposure occur at concentrations lower than the previous 1-hr standard and that exposure times longer than one hour are of concern. Thus, the 1-hr O3 standard is being phased out and replaced with the 8-hr O3 standard, effective June 15, 2005. The Roanoke/Salem metropolitan area has been in attainment of the 1-hour standard. However, during the past several years, the Roanoke/Salem metropolitan area has exceeded the 8-hour standard. Under a program created by EPA, planners and leaders in the Roanoke/Salem area voluntarily developed strategies to improve air quality in the region and explored the feasibility of accelerating their implementation in exchange for the deferral of the nonattainment designation by EPA. This effort culminated in the development of an Early Action Compact (EAC) in December 2002. The EAC is a plan that is designed to reduce O3 precursor pollutants and improve air quality within the Roanoke/Salem area that has been in violation of the new ozone standard. On April 15, 2004, the EPA issued the Final Rule designating and classifying areas not meeting the NAAQS for the 8-hour ozone standard. In this Final Rule, the Roanoke/Salem area was recognized as one of the areas with an Early Action Compact where the nonattainment designation would be deferred and the transportation conformity requirements would not be applied. If the Roanoke/Salem area continues to implement the Early Action Compact, meet required milestones, and register three consecutive years of clean monitoring data prior to 2007, then the region will be reclassified to attainment in December 2007. Should the area fail to meet a milestone or register three years of clean monitoring data, it would be designated nonattainment by EPA and be required to meet the transportation conformity requirements within one year of the designation.*

Water Quality

The document reports that Option 1 is not located in the Vicinity of any existing public surface water withdrawals. However, it is located in the vicinity of two existing public groundwater supply wells. Mitigation measures that would be required to protect existing and future resources should be addressed.

Response: *Without a more defined alignment and consideration of design, it is difficult to identify suitable mitigation measures. A more accurate assessment of appropriate measures based on location and design can be more appropriately addressed during final design.*

Natural Resources

Terrestrial ecology and habitat, aquatic ecology and habitat, navigable waters, wetlands and floodways will be affected by the construction of any of the alternatives. Option 1 impacts the most forestland and the

second most agricultural lands, although not by significant amounts. Option 1 affects three crossings of navigable streams, 26.29 acres of wetlands, 6 floodway crossings and 23 floodway encroachments. The document again primarily addresses these problems only from a quantitative measure and does not address the qualitative impacts. Mitigation measures are only discussed in general terms. The document should identify and address specific mitigation measures at each location.

Response: *Without a more defined alignment and consideration of design, it is difficult to identify suitable mitigation measures. A more accurate assessment of appropriate measures based on location and design can be more appropriately addressed during final design.*

Hazardous Materials

Option 1 has the lowest incidence of existing underground storage tank sites. Remediation measures presented were very general. Additional information on the specific sites is needed to assess the true impact on these underground storage tanks.

Response: *Additional information on the specific hazardous materials sites is provided in the Hazardous Materials Technical Memorandum.*

Parklands

Approximately 3.73 acres will be required to cross the Blue Ridge Parkway. No impacts are stated other than the requirement for the land. Qualitative statements should be made regarding the impact of crossing this important natural resource and tourism attraction.

Response: *FHWA and VDOT recognize the importance of cooperating with the NPS. During the preparation of the FEIS additional coordination with the NPS will occur to address design standards, alignment location, mitigating measures, and management of Parkway closures for inclusion in the MOA.*

Conclusions

In conclusion, the document is very broad and general in nature about most mitigation measures that will be required for Option 1, which would directly affect Botetourt County. This route option is opposed by the County Board of Supervisors, County staff and local citizens groups. In addition, it is inconsistent with the County's Comprehensive Plan.

We do not feel it is possible for the CTB to make an informed route selection if the impacts and proposed mitigation measures are not clearly stated for each alternative. We recommend that specific negative impacts and required mitigation measures be identified before a route is selected. Selection of a route through Botetourt County based on the general nature of the document would be unfair to the citizens of the County.

If you have any questions, please call.

Sincerely,

Stewart A. Lassiter, P.E.
Associate

