

5787 Twelve O'clock Knob Road
Roanoke, VA 24018-80S3

12 January, 2001

I-73 Location Study
Salem District Office
P.O. Box 3071
Salem, VA 23153

Dear I-73 Location Study Team:
Subject: I-73 DEIS Paragraph 4.5.4.1 Visual Effects

The document is an Environmental Impact Statement That is to say what impacts this project will have on the environment. In this case, how will the visual quality be effected? The introduction of a road into one's view shed changes the environment. It changes the visual quality. It has a visual impact. Views from the road only change the view shed to the extent that one can see the road .The quality of the view shed has not been improved or changed by being able to see it from a road. What has changed is the way we can gain access to the viewpoint. Changing the way one can access to a viewpoint does not change the visual environment seen from this viewpoint Thus the views from the road cannot be included in an Environmental Impact Statement unless the project has changed the view.

The assertion of the DEIS is 'By constructing the road through a beautiful area it becomes more beautiful because more people can see the beauty'.

The road will provide access so that more people can see the beauty of the area.

Let's use this line of reasoning.

The Shenandoah Valley is beautiful. By the contraction of I-81 in the Shenandoah Valley, the valley is more beautiful, because the views from I-81 are high quality views. From I-81 more people can see the views. Giving more people access to the views has improved the Visual Effects and thus making the valley more beautiful. We can increases the beauty of the Shenandoah Valley by increasing the number people that travel I-81. We can build more interstates down the valley, which will also increase the beauty by giving more views of the valley from the new roads.

It may be nice to have better access to a view, but that does not improve or change the environment. If views from the road" is important, they need to part of the justification for the project not in the Environmental Impact Statement

I hope that this demonstrates "views from the road" has no place in the Environmental Impact Statement.

Response: *The EIS does not assert that an area becomes more beautiful because more people can see the beauty; this is illogical. It would be more appropriate to say that a road in a beautiful area may allow a greater number of people to experience the beauty that was not readily accessible before. Of course, such a statement would depend on individual circumstances. The federal guidelines (FHWA Technical Advisory T6640.8A) specifically state the affected environmental discussion should provide information that identifies the different viewer groups in the study area. The highway viewers are*

identified under two classes: (1) Those with a view of the road and (2) Those with a view from the road. As long as the methodology is used consistently throughout all build options, the results should allow for a comparative analysis of which options has a greater visual impact than others and which provide the greatest visual quality. In addition, CEQ's regulations implementing NEPA require that an EIS address the impacts of the project on the environment whether those impacts are beneficial or adverse. Constructing a road in an area that allows the driver to experience beauty in a way that was not readily available before the project was constructed is a benefit that the visual impact analysis attempts to capture. This is not to suggest that the adverse visual impacts associated with the "view of the road" is offset by the benefits associated with the "view from the road". Rather, this information is presented in a numerical form, and it is up to the decision makers to decide what value they would place on each. In addition, the visual quality analysis identified areas of special visual concern such as the Appalachian Trail, Blue Ridge Parkway, Roanoke Mountain, and Mill Mountain and addressed them separately.

Respectfully.

Donald R. Nulph

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Roanoke, VA 24018-80S3

12 January, 2001

I-73 Location Study
Salem District Office
P.O. Box 3071
Salem, VA 23153

Dear I-73 Location Study Team:
Subject: I-73 DEIS Noise effects on the Appalachian Trail Experience

The Appalachian Trail needs to be recognized as having unique environmental considerations. The environment needs to be protected so as to protect the Appalachian Trail Experience.

The Appalachian Trail Experience:

The sum of opportunities that are available for those walking the Appalachian Trail to interact with the wild, scenic, pastoral, cultural and natural elements of the environment of the Appalachian Trail, unfettered and unimpeded by competing sights or sounds and in as direct and intimate a manner as possible.

The Appalachian Trail Experience will be diminished if option "1" or "1a" is selected for the build option for I-73. The DEIS does not properly take into account the visual and noise effects that the interstate will have on the Appalachian Trail Experience

Response: *The Draft EIS did identify the Appalachian Trail as a special visual concern area. It was noted that Segment 372 would enter the visual experience of the southbound Appalachian Trail hiker at the Fullhardt Knob Shelter, in the middleground distance, as the segment moves east of Coyner Mountain and aligns to cross the BRP in the Mountain Pass Road area. Project Team members took photos along the portion of the Appalachian Trail from Fullhardt's Knob to U.S. Route 220 during summer when foliage was heavy and during winter when foliage was non-existent. Segment 372 would be potentially visible to trail hikers for the three-mile (five-kilometer) hike from Fullhardt's Knob Shelter to U.S. Route 11. Toward the top of Tinker Mountain, another two miles (three kilometers) would be exposed to background views and displace farmland scenes, which are the primary subject of view from this part of the Appalachian Trail. These views are often currently impeded however, by trees and foliage that line the trail.*

The Appalachian Trail was also evaluated as an Activity Category A for noise impacts at three different locations. Activity Category A represents lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purposes. The FHWA Noise Abatement Criteria applicable to Activity Category "A" sites is 57 dBA Leq (1 hour). Existing ambient noise levels were recorded along the trail at the three sites as being 45, 47 and 46 decibels. The noise impact analysis using STAMINA 2.0 determined that the noise levels at these three sites under the future no-build condition would be 49, 47, and 46 decibels, respectively. Under the future build condition, the future noise build levels will be 51, 47, and 47 decibels, respectively. Under normal environmental conditions, a 3 decibel increase is barely perceptible to the human ear. Therefore, the only site that would be of concern is the site where existing noise levels of 45 decibels would increase to 51 decibels under the build scenario (even though this noise level only represents a 2 decibel increase over the future no-build noise level). However, as documented in the draft EIS, "noise from I-73 would dissipate to ambient or existing levels [since it is located over 3,000 feet away] and not represent an impact to the Appalachian Trail under [federal] regulations. Instead, noise levels at the Trail will continue to be dominated by

existing traffic from I-81" with minimal contribution from I-73. Incidentally, the CTB's approved location corridor does not include options 1 or 1a.

The DEIS needs to recognize that the Appalachian Trail Experience will be negatively impacted.

A person walking the trail believing that they are in wild and natural setting will become aware of sounds that do not belong in this setting. The Appalachian Trail Experience has been impeded. The person must hike further before they believe that they are in wild and natural setting without hearing sounds that do not belong in this setting.

Response: *The urban setting of the Roanoke Valley has already compromised the Appalachian Trail both visually and audibly. It does not seem reasonable to describe this section of the Appalachian Trail as "wild" considering its close proximity to an already urban setting. Although agreed that "Natural quiet" is an important component of many park experiences, this section of the Appalachian Trail currently does not have these qualities.*

The methods in the study do not adequately address the impact of the noise from the Interstate.

1. The noise standard is too high

If the noise from the Interstate is heard and recognized as foreign to the environment, then it is too loud. The sound levels to compare with are leaves hitting the ground, birds singing, a slight breeze in the trees, water running in a stream somewhere up the trail and many other sounds that we normally did not notice. Based on table 3.4-1 if the Interstate was 10 dBA it would be too loud or 3 dBA over the current instantaneous noise level.

Response: *The noise standard is established by federal regulation as are the procedures for assessing and determining noise impacts. FHWA does not have the authority to arbitrarily change regulations on a project-by-project basis. As stated above, the Appalachian Trail was evaluated as an Activity Category A for noise impacts at three different locations. Under FHWA regulations, Activity Category A represents the highest noise sensitive activity that a receptor can be classified under: lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purposes. The FHWA Noise Abatement Criteria applicable to Activity Category "A" sites is 57 dBA Leq (1 hour). Existing ambient noise levels were recorded along the trail at the three sites as being 45, 47 and 46 decibels. The noise impact analysis using STAMINA 2.0 determined that the noise levels at these three sites under the future no-build condition would be 49, 47, and 46 decibels, respectively. Under the future build condition, the future noise build levels would be 51, 47, and 47 decibels, respectively. Under normal environmental conditions, a 3 decibel increase is barely perceptible to the human ear. Therefore, the only site that would be of concern is the site where existing noise levels of 45 decibels would increase to 51 decibels under the build scenario (even though this noise level only represents a 2 decibel increase over the future no-build noise level). However, as documented in the draft EIS, "noise from I-73 would dissipate to ambient or existing levels [since it is located over 3,000 feet away] and not represent an impact to the Appalachian Trail under [federal] regulations. Instead, noise levels at the Trail will continue to be dominated by existing traffic from I-81." Therefore, under FHWA's policy, the contribution of I-73 to the noise experience on the Appalachian Trail is not perceptible.*

2. The study averaged the noise.

You cannot average awareness. This is a peak condition. The noise only has to last long enough

and loud enough to be recognized as being foreign to the environment. The method of measuring the noise level and averaging it over time is flawed as it pertains to the effect on Appalachian Trail Experience. The wind noise through the trees, which is normal to the forest, can be very loud. The noise from an Interstate may not be anywhere as loud but is not normal to the forest. If the noise from the Interstate can be heard along Appalachian Trail in this remote setting then the Appalachian Trail Experience has been impeded and the environment has been effected. The project will "substantially impair the activities, features, or attributes that qualify a resource for protection under section 4(f)". That is, the Appalachian Trail Experience will be impeded /demised.

Response: *The I-73 Location Study is a federal-aid highway project and as such is subject to FHWA regulations for the analysis of traffic noise including the determination of noise impacts (see 23 CFR 772). Based on FHWA regulations, when calculating noise levels, the worst hourly noise conditions are used, and all decisions are based on it even though those conditions are not expected throughout the day. You are correct when you state that the study averages the noise [over that one hour period]. This average is known as the equivalent sound level (Leq), and it is a single number, which represents the same sound energy as the time-varying sound evaluated over the worst-hourly noise conditions. While the determination of noise impacts is not based on a peak noise levels which may only last for a few seconds, it is based on worst-hourly conditions which do not last all day. This time-average value allows for convenient comparison of noise levels measured at other locations and lends itself to repeatability and standardization, which peak noise levels do not.*

As for Section 4(f), 23 CFR Sec. 771.135(p)(5)(ii) and (iii) identify when a Section 4(f) constructive use does not occur with respect to noise. Paragraph (ii) states that a Section 4(f) constructive use does not occur when the projected traffic noise levels do not exceed the noise abatement criteria (Category A: 57 dB(A) in this case). As documented above, the highest noise level that would be experienced along the Appalachian Trail is 51 dB(A). Therefore, there is no Section 4(f) constructive use. Additionally, paragraph (iii) states if the projected noise levels exceed the noise abatement criteria, a Section 4(f) constructive use does not apply when the increase in projected noise levels between the build and no-build condition is 3 dB(A) or less. As documented above and in the draft EIS, noise levels would stay the same or increase 1-2 dB(A) at the sites modeled on the Appalachian Trail. Therefore, although paragraph (iii) is not applicable to these circumstances because the noise abatement threshold is not exceeded, there still wouldn't be a Section 4(f) constructive use because the increase is barely perceptible.

3, The study did not recognize that the trail as linear.

It needs to consider the places along the trail where the probability of hearing the traffic is not zero. The impact is not at a point, but a distance on either side of the point that has been Compromised. Time and distance must pass before the impact has diminished to zero.

Response: *Noise levels were considered at three sites along the trail, and these sites represent the locations where the project would be closest to the trail and noise stood a chance of being most affected by the project. These sites are representative of the noise experience along the trail with the project in place.*

4. There is no question about hearing the Interstate noise.

Appalachian Trail Experience is being diminished by the noise from I-81 now and we believe it to

be more than 5000 feet from the trail. The sound from I-81 is not being dissipated, the noise can be heard. There is no reason to believe that I-73 will be any different. It would seem that the probability for hearing noise from any interstate would be more likely for a longer distance on the trail There will be more Interstate in line of sight from the trail.

Response: *As documented above, there is one site where the noise levels along the Appalachian Trail will increase by 6 dB(A) over existing conditions (45 dB(A) to 51 dB(A)). In comparing the design year build and no-build noise levels, we see that the contribution of the project to the 6 dB(A) increase is 2 dB(A), which, under FHWA policy, is not considered perceptible. That leaves 4 of the 6 dB(A) increase attributable to other sources.*

Respectfully,

Donald R. Nulph

8131 Webster Dr.
Roanoke, VA 24019
January 8, 2000

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

Dear Mr. Robb:

The following comments on the DEIS for Interstate 73 are being made in the name of Virginians for Appropriate Roads (VAR) and the Sierra Club, as well as myself.

Purpose and Need

An interstate transportation facility does not need to be an interstate highway. It can be, for example, a principal arterial highway and a railroad. Trucks are an inefficient and highly polluting way to move goods over long distances. They also cause safety problems, as cited frequently in the DEIS. We as taxpayers are not required to support the trucking industry. To "enhance goods movement by providing efficient transportation for truck traffic by separating existing and projected US Route 220 truck volumes from local traffic" can be done much more efficiently by making it cost-effective to put freight onto rail. The origin-destination analysis in the DEIS did not separate freight and passenger users, a distinction which would greatly facilitate transportation planning. FHWA requires that intermodal linkages be considered in the DEIS; they are not. Mention is made of the rail line which parallels the study corridor; however, no attempt is made to consider how it could be used.

Response: *We don't necessarily agree with your statement that trucks are an inefficient way to move goods over long distances. The fact that an overwhelming majority of all goods are moved by trucks would indicate that it is more efficient than any other means available.*

FHWA, like CEQ, requires the consideration of a range of reasonable alternatives. Congress has written into legislation that I-73 be included on the National Highway System. For example, 23 USC Section 103(b)(5) states, "Upon the completion of feasibility studies the Secretary shall add to the National Highway System any Congressional high priority corridor or any segment of such a corridor established by section 1105 of the Intermodal Surface Transportation Efficiency Act of 1991 (105 Stat. 2031 et seq.) that was not identified on the National Highway System described in paragraph." 23 USC Section 103(b)(2) identifies the components of the NHS as consisting of a) the Interstate System; b) other rural and urban principle arterials; c) other connector highways; d) the strategic highway network; and e) major strategic highway network connectors consisting of highways that provide major motor vehicle access between major military installations and highways that are part of the strategic highway network. Therefore, we agree with your statement that a facility that meets an interstate need does not need to be an interstate highway since interstate facilities are just one component of the NHS. However, rail facilities are not identified as a component of the NHS in existing law.

This is a National Highway System road. The law says that projects on the NHS may take into consideration other modes of transportation.

Response: *We are not sure what law you are referring to. NEPA requires federal agencies take into account a range of reasonable alternatives to address the purpose and need of a project on major actions. These alternatives may very well include other modes of transportation if they meet the purpose*

and need. Rail has not been shown to be a reasonable alternative in light of the purpose and need. As indicated above, rail is not identified as a component of the NHS. Instead, improving a "highway or transit project in the same corridor as, and in proximity to, a fully access-controlled highway designated as a part of the National Highway System" is identified as an eligible project for NHS funding. However, this does give legal authority or mean that all projects funded with NHS funding are eligible for inclusion on the NHS. More importantly, at 23 USC 109(h), Congress directs the FHWA to consider the economic, social and environmental effects relating to any proposed project on any Federal-aid system, and to make final project decisions in the best overall public interest. Privately owned railroads are not part of the Federal-aid system, and any improvements to such railroads would, in fact, be outside the jurisdiction of FHWA and at the discretion of the railroad companies. We are not aware of any available federal highway funding categories that can be used to implement privately owned railroad improvements. Notwithstanding, the final EIS documents the results of the Virginia Intermodal Transfer Facility Study that was prepared in 2000 to help determine the possibility of reducing heavy truck traffic on long haul highways in Virginia. Generally, the study found there to be few circumstances that make rail a viable alternative to freight trucking.

Freight movement to the port of Charleston is already meaningless in view of the fact that the city of Charleston has rejected the I-73 connection.

Response: *In South Carolina, a feasibility study has been completed and a broad corridor has been identified. With legislation, Charleston has been replaced with Myrtle Beach as the preferred eastern terminus of I-73. Although it appears that Charleston may not be the preferred southern terminus of I-73 for the State of South Carolina, freight movement between Sault Ste. Marie and Charleston would be enhanced by I-73 if environmental studies identify Myrtle Beach as the southern terminus. If I-73 is constructed to Myrtle Beach, I-73 would cross I-95 which would provide travelers using I-73 with a more direct route to I-26, the only interstate route leading into Charleston. In February of 2005, an announcement was made whereby the Carolinas had reached agreement on the entry point of I-73 into South Carolina. The agreement signaled an opportunity for both states to proceed with the development of I-73 in their respective states.*

Regarding the fifth Purpose, it is interesting that one of the purposes of a project that was started six years ago was just discovered in the past few months! This fact negates any credibility that the fifth purpose might have.

Response: *The fifth purpose, 'Congressional Intent', was added to the project in response to suggestions provided by federal agencies in their review of the Pre-Draft EIS. EPA and COE requested that the justification for an interstate facility be clarified in the DEIS. Congressional Intent was an obvious but overlooked purpose for the project when the original purpose and need statement was drafted. Consequently, it was added before the DEIS was made available to the public in November, 2000.*

Economic benefit

Section 2.3.1.2 begins with the statement "The relationship between economic development activity and investment in transportation facilities is fundamental to the understanding of market activity and the distribution of that activity." Yet no benefit cost analysis has been done for I-73. Only one 1994 report, illustrating impact of interchange development to generate expansion in the service industry, is cited. From it the DEIS extrapolates that "Broader economic impacts to more dispersed employment sectors can likewise be anticipated by transportation investments." The question is, which transportation investments?

Reference to the 1996 FHWA research paper entitled "Contribution of Highway Capital to Industry and National Productivity Growth" already indicates a decrease in the rate of return on highway investment by the end of the 1980s. A more recent FHWA study in 1998 indicates that the decline in return continued into the early 1990s. Other studies show that the rate of return of new highways, especially in

rural areas, is just about negligible. (Emily Manetta, "Weighing the Costs" available at <http://thwww.geocities.com/seventythree2000/paper/paper.html>)

In August 1998 Mr. Roy E. Denmark of the U.S. Environmental Protection Agency stated in a letter to Mr. Ken Wilkinson of VDOT, "A major reason given for this proposal is economic development along the Rt. 220 corridor. The DEIS should provide a thorough and realistic appraisal of this potential. Included in this analysis should be discussion of the economic benefits from each of the alternatives. A clear picture should be presented on how much of this proposed economic development potential can be realized from local improvements to 220 as compared to a new interstate style road. A cost-benefit analysis of the various alternatives should be presented. In addition, an analysis of how much of the potential economic benefit from I-73 is dependent on construction of the entire interstate as compared to construction of segments of it should be included."

NEPA regulations recommend that a benefit cost analysis be incorporated into a DEIS if it is relevant to the decision-making process. Since economic development is one of the purposes and needs cited for this highway, and since it is one of the primary political drivers for interest in this highway, a benefit cost analysis needs to be performed. Since, as it is clear that selection of the data to be included in a benefit cost analysis can differ widely depending on the preparers' biases and assumptions, one solution would be to have several independent benefit/cost analyses performed. These analyses must quantify not only the direct costs and benefits, but the indirect ones as well.

Response: *The development of public infrastructure has historically been questioned both in regards to the role of government in these type of decisions and the engineering economy of the investment decision. Transportation capital investment decisions are often made under the rationale of both. The role of government is often championed as the provider of services that privately can not be established under the criteria of return on investment. Thus, it is commonly accepted that in matters of defense, public works and education, the state and federal government have a primary role. In general, the private sector has neither the capital nor the patience to realize the slow rate of return that public infrastructure entails. One of the first acts of the US Congress was to appropriate funds to construct a lighthouse in Virginia to aid in the safety of shipping and to promote commerce. The capital cost and the on-going maintenance of the lighthouse were secondary to the contribution of the lighthouse to the general welfare of the population.*

The benefits and costs of transportation investment are both direct and indirect and have been extensively studied since the mid-nineteenth century. The sub-discipline has been known as engineering economics and has been in place institutionally long before MBA and business economic programs. This literature can be traced back to the mid-nineteenth century with the classic texts of W. M. Gillespie in 1848 and A. M. Wellington in 1887. Growing academic interests in the 1920's increased the body of literature on the economics of roadway investment. The American Association of State Highway and Transportation Officials (AASHTO) published the first discounted present value approach in 1952 and 1960. In 1977 AASHTO published A Manual on User Benefit Analysis of Highway and Bus Transit Improvements. The 1977 Manual is the seminal treatment of benefit cost ratio analysis for transportation projects. The DEIS, in section 4.12 (Secondary and Cumulative Impacts), references several large scale economic research endeavors that clearly and statistically link economic growth with highway transportation investment. There is a long standing history of highway investment projects where benefits exceed cost.

A recent VDOT/FHWA feasibility study for the TransAmerica corridor across the state clearly illustrated the economic and user benefit of transforming substandard rural arterial facilities to a higher standard. A benefit cost ratio analysis for the TransAmerica project resulted in robust B/C ratios and job growth impacts of approximately 69,000 full time equivalent jobs.

The conclusion that transportation investment in Interstate and other high end highways has less utility in terms of rate of return now than during the early 1960's should be no surprise to anyone. The same can

be said of investment in computers, cell phones or cancer treatment technology. Declining rates of return on investment are expected as markets become saturated. Incremental increases under that scenario naturally exhibit a declining rate of return.

What is important is there is still a rate of return on highway capital investment. This is illustrated in Figure 3.2.1 as taken from the FHWA article "Contribution of Highway Capital to Output and Productivity Growth in the US Economy and Industries", by I. Nadiri, August, 1998. This figure compares rate of return on highway capital in ten year increments from 1960 to 1991. The fact that highway capital in 1991 realized just under a 10% return is remarkable. By definition, a public project that provides a positive return on investment not only adds value to public welfare but also exceeds the benefit cost ratio of unity, where the long term monetized benefit of the project exceeds the long term capital and maintenance cost of the project.

While capacity expansion of highway investment has slowed over the last decade the growth in demand has not. That trend, if not countered, has serious consequences on mobility, air quality and quality of life. It is important to note that VMT has historically increased in the last three decades at rates in excess of population or employment growth. This is a national trend and manifests itself statewide and locally and has no correlation with growth in roadway capacity. Nationally, VMT has increase 37% from 1984 to 1994. During the same period in Virginia, VMT increased 52%. During that same period, new construction adding roadway capacity has increased only 9% to 10%.

Nationally, VMT has increased 259% from 1960 to 1997, a pace that outstrips growth in fuel consumption, vehicle registration, population, and roadway capacity. The growth in VMT has occurred far ahead of roadway network capacity. From 1993 to 1999 in the Southeast, the 14 largest metropolitan areas exhibited an annual average growth rate in new roadway mileage of 1.3%. During that same period VMT grew at an annual average rate 3.4%. These statistics are corroborated in EPA's publication, Indicators of the Environmental Impacts of Transportation, which contain similar statistics. For example, the U.S. population has grown by 30%, the number of licensed drivers has increased 87%, and VMT has increased 125% over the past 30 years. During this same time, new highway capacity has only increased 6%.

The decision to advance one I-73 alternative over the other is a complex issue whose consequences reach beyond the accounting exercise of balancing life cycle user benefits over discounted capital and maintenance costs. Notwithstanding, a cost-benefit analysis was prepared for the preferred alternative. In response to comments on the draft EIS, this information has been included in the final EIS and a qualitative comparison made to the other alternatives.

Addressing the decline in highway capacity to handle the growth in travel demand can not be accomplished with maintenance measures. This was measured in the I-73 Draft EIS during the evaluation of the No-Build and TSM alternatives, neither of which were responsive to the project purpose and need. Congress realized this in the passage of the Intermodal Surface Transportation Efficiency Act of 1991 and the Transportation Equity Act for the 21st Century in 1998 where I-73 was identified as a high priority corridor.

The decision to advance one I-73 alternative over the other is a complex issue whose consequences reach beyond the accounting exercise of balancing life cycle user benefits over discounted capital and maintenance costs. Notwithstanding, in order to address public comment, FHWA requested a benefit-cost analysis for the alternative approved by the CTB. This information is included in the appendices to the final EIS. 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%.

Keep in mind that economic development is just one need identified for the project. Although the rural areas do not have as high an economic development potential, the proposed project will serve as a link in the I-73 high priority corridor from Michigan to South Carolina.

Air pollution

The DEIS states that air pollution levels would be reduced by the Build alternatives because of reduced congestion. This argument falls totally short of the mark because:

- 1) Speeds above 55 mph increase pollution. Interstate highways discourage speeds below 55 mph.
- 2) Congestion may be eased on the highway itself, but traffic entering and leaving the highway will increase congestion on roads which vehicles use to get to and from the highway, thus increasing overall pollution in the study area.
- 3) The Build alternatives are expected to bring increased traffic into the area; therefore, air pollution will increase. More vehicles means more pollution.
- 4) Quick access to previously undeveloped areas encourages people to live farther away from the places where they work, lengthening their commuting distance and increasing vehicle miles traveled overall in the area.

Moving the traffic to the east or west will not improve overall air quality in the region. The eastern and western routes are on the fringes of the bowl, and the pollution they generate will not just blow away. The DEIS states that the Clean Air Act will not apply because the study is located in an attainment area for CO and ozone. However, if the new standards are adopted, the area will likely fall into a non-attainment status, and the Clean Air Act will then apply. The Commonwealth Transportation Board should not rush into selecting a Build alternative that will increase air pollution without taking the proposed new standards into consideration.

Response: *As already documented in Section 3.3 of the DEIS, all of the counties and localities in the study area are currently designated by EPA as being in attainment for the 1-hour standard for ozone, nitrogen dioxides, and particulate matter. EPA is not proposing to designate any new 1-hour ozone or PM10 areas; instead, the 1-hour ozone standard will be revoked on June 15, 2005, by EPA in favor of the new 8-hour standard. With respect to this 8-hour standard, the EPA recently determined that the Roanoke area consisting of the City of Roanoke, City of Salem, Roanoke County and Botetourt County exceeded the 8-hour standard for ozone based on current monitoring data. However, instead of designating the area nonattainment, they deferred the nonattainment designation because the area is proactively working to clean up the air through implementation of an Early Action Compact (EAC). If the area meets the required milestones prescribed for EAC areas and can submit three consecutive years of clean monitoring data, then the region will be reclassified as an attainment area in 2007. Interstate 73 would have no bearing on this effort since it would be nowhere near construction by 2007. Notwithstanding, EPA's preamble to the 8-hour final rule states that conformity is not a control measure to be used like the voluntary measures that are included in the EAC. Rather, conformity establishes a process in nonattainment areas for state and local governments to consider the broader emission impacts of their transportation decisions. In addition, the EAC protocol developed by EPA does not require the EAC area to meet the transportation conformity requirements since the conformity requirements only kick in one year after an area is designated nonattainment. Consistent with 40 CFR 93.102(d) and section 176(c)(6) of the Clean Air Act, conformity for the 8-hour standard does not apply*

in early compact areas provided the area meets all of the terms and milestones of its EAC. Failure to meet these terms or milestones will invoke the nonattainment designation requiring conformity for the 8-hour standard within one year of the designation. Therefore, it is not practical to withhold a decision on a major project waiting to see if an area will be designated nonattainment and the conformity requirements invoked (2009 at the earliest). Complicating this matter is the fact that the MPO, which is one of the parties responsible for demonstrating conformity, is not set-up to address the issue because they have not been officially designated nonattainment by EPA. Neither FHWA nor EPA have the authority to require attainment areas to comply with the requirements of the Clean Air Act.

A couple of other points need to be made about I-73 and air quality. The determination by EPA that the Roanoke area violates the 8-hour standard for ozone is based on existing monitoring data. Therefore, the status of Interstate 73 in Virginia played no role in that determination or the circumstances that led to it. Based on experience in other nonattainment and maintenance areas like Hampton Roads, Richmond, and Washington, D.C., individual projects have very little influence on whether an area can demonstrate conformity in accordance with the Clean Air Act. The reason for this is because individual projects do not have a substantial influence on vehicle miles traveled. If a road project is not implemented, then the VMT that it would have carried will be borne by the existing roadway network.

Although traffic would eventually grow in the region, in the near term the Build Alternative would generally reduce contaminant levels by diverting traffic from other study area roadways and increasing average travel speeds. The area of concern when it comes to air quality is the area that has experienced exceedances of the 8-hour standard, namely, the City of Roanoke and Roanoke County; these are the two localities that would be directly affected by Interstate 73 since it would run along existing I-581 and U.S. Route 220. As documented in the draft EIS, these sections of roadway would operate at level of service C and D because of the volume of traffic they would carry. Because this portion of the project will not be operating at free-flow conditions and would instead experience some congestion, the average speed is expected to be less than 55 mph. Notwithstanding, it is true that ozone emissions increase from vehicles traveling at speeds greater than 55 mph. However, this statement doesn't tell the whole story. Based on EPA's emission-speed curves, emissions from a vehicle decrease substantially between idling and 55 mph where emissions bottom out before increasing gradually. Just because emissions gradually increase after 55 mph doesn't mean that a vehicle traveling at 60 mph as an example, will produce more emissions than a vehicle traveling at 45 mph. A vehicle with an average speed of 60 mph will still produce comparable emissions as a vehicle with a average speed of 45 mph.

Finally, more vehicles do not produce more pollution under all circumstances. For example, few vehicles traveling under stop-and-go conditions could produce more emissions than many vehicles traveling at free-flow speeds on a principle arterial. Advances in vehicle technology and fuel efficiency as well as federal programs designed to reduce emissions play a significant role in the reduction of emissions. For example, statistics in EPA publications show that the U.S. population has grown by more than 30%, the number of licensed drivers has increased 87%, the gross domestic product has increased more than 150%, VMT has increased more than 125%, and energy use has increased more than 40% since 1970. Yet, during this same time period, overall emissions have decreased nearly 50%. Specifically, carbon monoxide has decreased 48%, nitrogen oxides 17%, volatile organic compounds 51%, sulfur dioxide 52%, particulate matter 34%, and lead 98%. In Virginia's nonattainment areas, conformity is often demonstrated despite the growth in VMT, population and employment that is forecasted to occur over a 20-30 year period. This has been possible because of the advances in vehicle technology and fuel efficiency as well as federal programs that are factored into the emissions model.

Safety

The note in the table on page S-4 states that "TSM improvements would result in marginal but not significant accident reductions." How is that possible when the TSM improvements were specifically designed to improve safety? The table on page S-4 was provided as part of the public information brochure and therefore should have stated in a clear and unbiased way that the methodology did not provide a way to estimate the safety improvements for the TSM alternative. It should not have included the word significant as FHWA strongly recommends against using the word "significant" in EIS documents.

The table on page S-4 has a column entitled "Reduction in total accidents" but there is no explanation of what the units represent. If Option 1 reduces the total number of accidents by 50 accidents, what was the total before the reduction? For the Build options, do the numbers include existing US 220 plus the new Interstate, or only US 220, or only the new Interstate?

It needs to be noted that the Clearbrook Fire and Rescue Squad has observed a significant reduction in accident rates since improvements were made along that section of US 220.

Response: *The TSM Alternative proposes a number of sight distance improvements, median improvements, and horizontal and vertical geometry improvements along U.S. Route 220. The improvements were identified to address safety concerns along existing U. S. Route 220 where the worst safety conditions have been identified. Of the 32 proposed TSM improvements, seven involve the 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 the inclusion of a continuous two-way center left turn lane. 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. In addition, because the existing facility doesn't meet current design standards and TSM by concept doesn't allow for major corridor improvements, safety will continue to be a concern on U.S. Route 220 even of the TSM alternative is implemented. In contrast, 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. These design features all serve to enhance safety on the build alternatives compared to the TSM alternative.*

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
<i>Accidents</i>	278	410	360 (-50)	215 (-195)	155 (-255)	270 (-140)
<i>Injuries</i>	208	325	285 (-40)	170 (-155)	120 (-205)	215 (-110)
<i>Fatalities</i>	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 comment regarding the Clearbrook Fire and Rescue Squad is noted.

Farmland

Options 1, 1a, and 4 exceed the benchmark of 160 points on the Land Evaluation and Site Assessment score. All the other Build options fall only slightly below 160 points. This point needs to be highlighted in the DEIS. FHWA guidelines require a map in the DEIS as well as a discussion of alternatives to avoid farmland impacts when the scores exceed the benchmark.

Response: *This information is included on 4.2-19 of the DEIS. It states that Options 1, 1a, and 4 exceed the Farmland Conversion Impact Rating of 160. Maps included on DEIS pages 3.2-15 through 3.2-19 depict prime agricultural farmlands. Avoidance for Options 1, 1a and 4 was not considered an appropriate strategy to mitigate or reduce the Farmland Conversion Impact Rating due to prevalence of prime soils throughout the study area. "Avoidance" alternatives include the other eight Build Alternative Options that did not exceed 160.*

TSM

VDOT officials have stated to the press that the Transportation Systems Management option (TSM) was included in the DEIS only because NEPA required it. Apparently that is the reason it was given such short shrift in the DEIS. The DEIS repeatedly states that TSM fails to address the purpose and need of the location study. In the public information sessions, no mention was made of TSM except for its inclusion in one chart in the corner of the room. Compare that to the maps and photographs filling the room with propaganda for the Build alternatives.

Response: *As stated in Section 2.5 (TSM Alternative), there is no regulatory basis for considering the TSM alternative. If someone stated that NEPA requires consideration of the TSM alternative, they misspoke. The impetus to consider a TSM alternative goes back approximately 20 years when significant advances were being made in computers and communication. Planners saw TSM as an inexpensive solution for addressing congestion while minimizing environmental impacts. Information on the purpose and intent of the TSM alternative is limited, with the only source being FHWA's Technical Advisory T6640.8A. The TSM alternative was intended to be a stand-alone alternative that completely addresses the purpose and need for the project. The intent of the TSM alternative is to maximize the efficiency of the existing transportation system, therefore, it only consists of minor, low-cost improvements with little work outside the right-of-way. Major improvements such as the addition of lanes, the wholesale correction of geometric deficiencies, or the reconstruction of an entire route would be considered a separate build alternative and not a TSM alternative. This language was added to the draft EIS because of misinformation about the TSM being circulated prior to the release of the draft EIS regarding the regulatory basis for considering the TSM alternative.*

The DEIS states that TSM is an urban concept not really intended for rural highways, and that VDOT is stretching the TSM concept in the way it is using it in this DEIS. That may be true, but if so, VDOT has not stretched it far enough. It does not have to be called TSM, but an intermediate solution that takes advantage of existing transportation infrastructure needs to be developed much more fully than it has been in this DEIS.

Response: *Low build or intermediate build alternatives were explored that evaluated the feasibility of providing a principal arterial with a 60 mph design speed. This alternative provided no control of access and at-grade intersections. This design concept was tested on the U.S. Route 220 corridor. It did not include any improvements from I-81 to just south of Boone's Mill. The Martinsville and Rocky Mount Bypasses would remain in place as part of the system with no improvements. This concept would involve major construction of both the south and north bound lanes of existing U.S. Route 220, would not raise the posted speed above the current 55 mph (45 mph from Boone's Mill to Route 419) and would cost approximately \$300 million (ROW & construction costs). This concept addresses safety better than the TSM, but again does little to address the other purpose and need elements of freight transport, economic growth and vitality, operations (access & capacity) or general mobility and linkage (speed, travel time, travel delay and operational cost reduction)."*

Several cooperating agencies and citizens requested after the DEIS was published that an intermediate build alternative be evaluated that includes an upgrade of US 220 to a 60 mph design speed. In response to these requests, VDOT has included in the FEIS further explanation of the low build/intermediate alternative which can be found in Chapter 2, section 2.2.3.1 entitled Highway Improvements Eliminated From Detailed Study .

It is a terrible waste of talent and taxpayer money to spend so much effort designing and promoting eleven new build alternatives, and so little on the TSM alternative. Your very name, Virginia Department of Transportation, should remind you that your job is not only to build highways, but to build transportation systems, supplementing and linking highways with other transportation modes such as rail and air. No mention was made in the DEIS of I-73 as a part of a transportation system. To enhance transportation linkage, multimodal connections must be considered. If we are to foster planned economic development between southwest Virginia and the Piedmont Triad, we need to plan our transportation systems and not just hack out a highway.

Response: *Despite its name, VDOT has no authority to make decisions regarding rail and air; those issues are addressed by other state agencies. While important to our overall transportation system, Non-highway alternatives would not satisfy the Congressional intent that I-73 be included in the National Highway System and would also not provide safety improvements for vehicular traffic traveling in this portion of the U.S. Route 220 corridor. Non-highway alternatives are also excluded as components of the NHS as explained above.*

As stated above, privately owned railroads are not part of the Federal-aid system, and any improvements to such railroads would, in fact, be outside the jurisdiction of FHWA and at the discretion of the railroad companies. We are not aware of any available federal highway funding categories that can be used to implement privately owned railroad improvements. Notwithstanding, the final EIS documents the results of the Virginia Intermodal Transfer Facility Study that was prepared in 2000 to help determine the possibility of reducing heavy truck traffic on long haul highways in Virginia. Generally, the study found there to be few circumstances that make rail a viable alternative to freight trucking.

TSM avoids locking oneself in to a grandiose design that is liable to be cut short by budget restrictions. TSM can be designed to lay out a plan for step-by-step upgrades which can actually be achieved. TSM does not have to be, as VDOT officials have been quoted as saying, "a patchwork of small improvements." It can be a real plan. The temptation to scrap what already exists and start over must be resisted. Existing roads usually are where they are because population and industrial centers are there, and because the terrain is friendly to passage. A new highway will leave old towns behind to decay, and create new towns where farms and woodlands need to be preserved. The new-terrain options are far away from connections to other transportation modes. The biggest argument against the TSM Alternative at the public hearings was that while it addressed safety concerns, it did not address areas of congestion and therefore would not enhance mobility through the corridor. There is no reason why

TSM could not address congestion as well as safety. Section 3.1 makes it clear that congestion is limited to only a few specific areas, and most of those occur at I-581 interchanges and at the section of US 220 just south of the limited access portion of the roadway. Most of the rest of US 220 is congestion-free, with the possible exception of some parts of Martinsville. The congestion areas are traditional urban problems for which the "traditionally urban TSM was intended!"

Response: *The selection of a build alternative by the CTB does not rule out the possibility that safety improvements could still be made to U.S. Route 220 or that safety improvements could proceed as separate projects.*

While TSM began as a "traditionally urban solution, FHWA states that the concept of achieving maximum utilization of existing facilities is equally important in rural areas. Before selecting an alternative on new location for major projects in rural areas, it is important to demonstrate that reconstruction and rehabilitation of the existing system will not adequately correct the identified deficiencies and meet the project need." Instead of exploring reconstruction and rehabilitation of the existing system, VDOT has devoted its efforts to demonstrating that it will not adequately correct the identified deficiencies and meet the project need.

It is very clear throughout the DEIS that the negative impacts of the TSM Alternative are either nonexistent or an order of magnitude less than those of any of the Build alternatives. Therefore, to design the TSM alternative just short of meeting the Purpose and Need is to criminally mislead the public into wasting precious environmental and financial resources.

Throughout the DEIS statements are made that TSM does not address the Purpose and Need for the project. If that is the case, why wasn't the effort put into TSM that would make it address the Purpose and Need? It can be done. It simply has not been done.

Response: *Existing Route 220 does not meet current design standards for principle arterial routes, which is what the facility is functionally classified as. Any improvements to Route 220 will need to be to principle arterial standards because of the functional class of the roadway. Because of the substandard design of the roadway or the outdated geometry of the facility, an argument can be made for improving the entire corridor at which point the improvement is no longer a TSM alternative. It is a full-blown build alternative with a similar profile as the Interstate option (see Figure 2.3-1 of the DEIS). Generally speaking, the build alternatives located along the existing facility represent alternatives to bring the TSM alternative up to the point where it more comprehensively addresses the purpose and need for the project using a design standard consistent with the route's functional classification.*

For an option that has been so underrepresented by VDOT, TSM has garnered remarkable public support. That is reason enough for VDOT to full explore it in a supplemental DEIS.

TSM can also be combined with Build alternatives, just as different Build alternatives can be combined with one another. FHWA guidance presumes that TSM elements can be part of a build alternative, reducing the scale of the highway link.

Incidentally, the cost of the TSM Alternative may have been incorrectly overstated. On page S-12, under Design Elements and Costs, it is stated that the TSM Alternative consists of approximately 60 suggested improvements, the total cost of which is estimated at \$146 million. Since the TSM Alternative includes only 34 improvements, the 60 improvements cited here must include those improvements that are also part of the No-Build Alternative. Those improvements should not be included in the cost of the TSM Alternative.

Response: *TSM would not rebuild many miles of US Route 220. The TSM ranges from 10.76% to 13.19% of the cost for the full build options. The TSM improvements affect approximately 86, 600 LF of US Route 220 from Roanoke to the North Carolina line. This represents 30.8% of the 281,000 LF of US*

Route 220 from Roanoke to the North Carolina state line. The 86,600 LF of TSM improvements to US Route 220 include an array of minor and major improvements ranging from additional left turn lanes, the closing of median crossovers, signal improvements, shoulder widening to major grade and pavement replacement. TSM is a series of spot improvements that address immediate safety needs along 16.4 miles of roadway

The TSM alternative lacks convincing components of the I-73 purpose and need such as:

- TSM will not compliment the functional classification of US Route 220,
- TSM will not increase capacity of the entire US Route 220 corridor, nor will it improve the level of service,
- TSM will not improve mobility and access between Virginia and other regions,
- TSM will not attract the economic activity of an Interstate facility,
- TSM does not address the Congressional mandate in the TEA 21 highway reauthorization act.

As a \$146 million alternative TSM is not a low cost alternative for scattered improvements to 16.4 miles of rural principal arterial highway. TSM is questionable in terms of its operating benefits and characteristics when compared to the more aggressive interstate alternatives. These costs do not include No-Build Alternative improvements. More information on costs for the TSM Alternative can be found in the Capital Cost Technical Memorandum.

As stated above, the selection of a build alternative by the CTB does not rule out the possibility that safety improvements could still be made to U.S. Route 220 or that safety improvements could proceed as separate projects. Transportation priorities are established by VDOT in cooperation with local governments.

Public participation

The high price of obtaining copies of VDOT documents has deterred many interested parties from reading even the DEIS, never mind the Technical analyses. The scheduling of the public hearings between Thanksgiving and Christmas, and the comment period being sandwiched into the holiday period, has limited the ability of interested parties to study and understand the 550 page DEIS. This has short-circuited an important source of input into a decision which carries very heavy impacts to the communities involved. Many issues which were raised at the public information sessions were greeted with the response that would be considered only at the FEIS stage, after a route has been selected. However, the selection of a route limits the options, and many of these issues need to be studied at the DEIS stage.

Response: Copies of the DEIS were \$61, the exact cost for reproduction. In addition, a CD containing the entire DEIS was available for \$15.50. The document was made available for review at many public locations including libraries and VDOT District and Residency Offices. 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.

Requested action

A supplemental DEIS needs to be written and presented to the public, allowing a comment period appropriate to the complexity of the topic and the immensity of the consequences. This supplemental DEIS needs to address the concerns expressed herein as well as by other commentators. In particular, it needs to include an alternative which goes beyond safety improvements to fully address the purpose and need for the project by taking advantage of existing transportation infrastructure.

Response: *Concerns in and of themselves do not warrant the preparation of a supplemental EIS. New information or circumstances or changes to the project that result in significant environmental impacts not already evaluated in the draft EIS are the reasons supplemental EISs are prepared. A reevaluation has been prepared to address new information or circumstances or changes to the project in accordance with 23 CFR 771.129(a), and it has been included in the final EIS. This reevaluation was used to determine if any new information or circumstances or changes to the project warranted the preparation of a supplemental EIS and concluded that one was not warranted.*

On behalf of VAR, the Sierra Club, and myself,

Yours truly,

Kristin B. Peckman

cc:

Peter Stokely

EPA/EPIC

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Mr. Bruce Blanchard, Director

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18th and C Streets, N.W.

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Dana F. Taylor
2700 Poteet Road
Hardy, VA 24101
January 11, 2001

Mr. Earl T. Robb
State Environmental Administrator - VDOT
1201 East Broad Street
Richmond, VA 23219

Re: 1-73 DEIS-Safety issues. Quality of Life, Wildlife, & Failure to Inform the Public

Dear Mr. Robb:

I am submitting these comments on behalf of myself, and on behalf of Virginians for Appropriate Roads. VAR is submitting -other comments under separate cover. Please accept all comments submitted by VAR.

PURPOSE AND NEED

The primary focus of this project was listed as "1. To provide safety improvements along the U.S. Route 220 study area." After reviewing the Material associated with this matter, TSM is the ONLY choice that will accomplish this task. A new terrain interstate can in no physical way address Safety issues on 220.

Response: *The listing of safety as the first component of the purpose and need should not be construed to mean that it is the highest priority. Irrespective of safety, the project itself originated out of a finding by Congress that recognized that the areas of the country that are not currently served by an Interstate or comparable type facility have not experienced the economic benefits of those areas that are. In response, Congress established high priority corridors for study, such as I-73, to link regions and promote economic growth.*

As for safety, TSM improvements will enhance safety on existing US Route 220. TSM will not however bring all of US Route 220 up to current VDOT or AASHTO design standards for roadways currently classified as urban or rural principal arterials. Implicit in that standard is the improved safety features that accrue with the horizontal and vertical geometry of a principal arterial. TSM improvement s would not assure that US Route 220 could achieve the safety level of a divided arterial highway design

In the long run true safety benefits, which include fatalities, bodily injury and property damage, are enhanced with the proposed interstate alternative. An interstate facility provides significant accident rate reductions over the conventional urban and rural arterial. According to statistics compiled for the year 2000, the National Highway Traffic Safety Administration indicates Virginia's interstate system has a fatality rate of 66 deaths per 100 million vehicle miles traveled in rural areas whereas principal arterials have a fatality rate of 102 deaths per 100 million vehicle miles traveled. In terms of saving lives, an interstate facility reduces fatalities by 35.3% based on statewide averages.

TSM would not rebuild many miles of US Route 220. The TSM ranges from 10.76% to 13.19% of the cost for the full build options. The TSM improvements affect approximately 86, 600 LF of US Route 220 from Roanoke to the North Carolina line. This represents 30.8% of the 281,000 LF of US Route 220 from Roanoke to the North Carolina state line. In keeping with the TCM concept, the 86,600 LF of TSM improvements to US Route 220 include an array of minor and major improvements ranging from

additional left turn lanes, the closing of median crossovers, signal improvements, shoulder widening to major grade and pavement replacement. TSM is a series of spot improvements that address immediate safety needs along 16.4 miles of roadway

The TSM alternative lacks convincing components of the I-73 purpose and need such as:

- *TSM will not enhance the functional classification of US Route 220,*
- *TSM will not increase capacity of the entire US Route 220 corridor, nor will it improve the level of service,*
- *TSM will not improve mobility and access between Virginia and other regions,*
- *TSM will not attract the economic activity of an Interstate facility,*
- *TSM does not address the Congressional intent in the TEA 21 highway reauthorization act.*

As a \$146 million alternative TSM is not a low cost alternative for scattered improvements to 16.4 miles of rural principal arterial highway. TSM is questionable in terms of its operating benefits and characteristics when compared to the more aggressive interstate alternatives.

Virginia Tech officials studying the stretch of Interstate 81, also know as, "The Killer Road", have determined that this interstate highway is, "at least as safe as similar spans of interstate." And furthermore, stated to Judge Pattisal, "our conclusions show that I-81 is as good or better than comparable interstates in terms of safety and is generally operating at a level of service consistent with its original design." (Tad Dickens, "Tech study: I-81 isn't that bad," The Roanoke Times, January 8, 2001, C1)

Other facts from this study revealed 11 fatalities in 2000, 19 fatalities in 1999- the second-highest death toll in the 1990's. It only stands to reason that at greater speeds, there is more potential for more serious accidents based on inertia alone. When compared to present-day U.S. 220, there were only 5 accidents, which killed 6 people in 1999, and 3 fatalities in 2000, (note: one fatality was a pedestrian who was killed as a result of walking into the path of an oncoming vehicle). Even with 20-28% truck traffic, which VDOT expresses as "even higher than those experienced on Virginia's Interstates". US 220 still has maintained a low percentage of fatalities.

Response: *Comparisons of accident data between facilities are not made by simply comparing the number of accidents; this results in an apples to oranges comparison. Instead, accident data on a particular facility is converted to the number of accidents per million vehicle miles to allow for an apples to apples comparison. A detailed investigation of accident rates was conducted as part of the preparation of the DEIS and in subsequent analysis and investigations for both US 220 and I-81. Across the State, accident rates for four-lane divided roadways without access control, such as US 220, have accident rates that are generally twice the amount as compared to four lane controlled access facilities, such as the proposed I-73. Accident rates are determined using the number of vehicles traveling along a roadway to identify crash rates comparable between different facilities regardless of the amount of vehicles using the roadway and length of the roadway.*

A detailed comparison of accidents and accident rates was conducted in response to the question for I-81 and US 220 for the year 1995. Using DEIS referenced VDOT information for the referenced year, 253 accidents and five (5) fatalities occurred along US 220 from the Roanoke county line south to the North Carolina State Line (approximately 58 miles). Interstate 81 experienced 1635 accidents and 20 fatalities during the same period along the entire length of roadway in Virginia (approximately 325 miles). Accident rates based on these numbers and daily traffic volumes are around 65 accidents per million vehicle miles (Acc/MVM) along US 220 and 41 Acc/MVM northbound and 46 Acc/MVM southbound along I-81. Thus, the overall accident rates on I-81 are almost 1/3 less than the corresponding accident rates on U.S. 220. While the number of fatalities is four times as great on I-81 as compared to U.S. 220, the roadway length of I-81 is more than six times greater indicating less fatal accidents occur per mile along I-81 than U.S 220. In addition, as detailed in the purpose and need section of the DEIS, some

sections of US 220 experience considerably higher accident rates than this average. The comment on the interstate highway being safer was made in regards to these issues and with regard to the overall State highway statistics.

In speaking with members of the Franklin County Sheriff's Department, as well as reviewing articles in the Franklin County News Post, it was repeatedly brought to my attention the cause of the accidents resulted from drunk/drugged driving and driver inattention, not from poor highway design. Also pointed out by a leading Franklin County law enforcement official was the intersection of Rt. 697 (Witrz road) and 220. There is a minimum of 25 impacts points at this intersection, yet, there have been no major accidents! People who drive this highway, local commuters are by far the majority, know this to be a high activity area and are more cautious as a result.

The horrible truck/school bus accident in 1999 was the result of gross driver inattention and **not** from sight distance, road design, road conditions, or congestion.

Response: *It would be hard to say what role a substandard highway design played in an accident involving a drunk driver because of their impaired judgment. We certainly do not condone drunk driving, but it logically follows that the chances of a drunk driver having an accident on a road that does not meet current design standards is greater compared to a similar type road that does meet current design standards. Drunk drivers aside, roads that have limited shoulders, poor sight distance, narrow lane width, limited recovery area, etc. are less safe for drivers let alone drivers whose judgment has been impaired.*

With these facts before us, TSM has identified the problem areas on US 220 and has issued viable upgrades which can begin decades sooner than a new terrain interstate and is fiscally more attractive and environmentally sound.

Since VDOT has focused its attention on the safety of 220, VDOT should be prepared to carry out its original intention. These major concerns were also reflected in the Federal Corps of Engineers letter to VDOT dated July 21, 1998.

Response: *Again, although it is acknowledged that the TSM Alternative would improve the safety of travelers on U.S. Route 220, safety is not the only component of the purpose and need. All of the alternatives have been evaluated in their ability to meet all of the components of the purpose and need of which safety is one component. Selection of a build alternative on new location does not preclude VDOT from carrying out safety improvements to Route 220. Several of the comments from the Army Corps of Engineers' letter were responded to in the DEIS and FEIS including additional information regarding the Purpose and Need of I-73.*

DEIS Table 2.3-4 is based on VDOT's Summary of Crash Data as it relates to VMT. BTS-Transportation Statistics Annual Report – Chapter Four has this to say about the "need" for more accurate data:

"Safety data are, broadly speaking, of two types; outcome data, such as numbers of accidents, fatalities, and injuries; and exposure data; typically expressed as vehicle-miles, passenger-miles or aircraft departures. The following is a list of major exposure data needs:

*because the common exposure measure for the highway mode, vmt, is derived for a sample, error bars on vmt would be very useful in interpreting fatality and crash rates; and

*measures of exposure of specific populations (e.g. elderly drivers or children) and exposure to specific conditions (e.g. adverse weather) are not available particularly for the highway mode.

Some outcome data are also either not available, or available in combination with fatalities, injuries and incidents, which are not strictly transportation related. Some of these data needs are:

*property damage from highway crashes.

For the highway user traffic congestion and delay are measures of highway performance. Unfortunately, direct measures are not now available to determine whether congestion and delay are getting better or worse for the nation as a whole. Two indirect methods are used, however: 1) congestion and delay calculations based on daily volume-to-capacity ratios such as those found in the Federal Highway Administration's (FHWA's) Highway Performance Monitoring System (HPMS) and 2) trip speed estimates based on commuter trip length and travel time data collected from travel surveys. (BTS-Transportation Statistics Annual Report-Chapter Four)

Two estimates of congestion using volume-to-capacity ratios are discussed here: the Texas Transportation Institute's (TTI's) studies of urban congestion and FHWA's estimates of volume-to-service flow (where service flow is a measure of capacity). In addition, results from various Nationwide personal Transportation Surveys augment these estimates. As shown below, the congestion indicators developed by these indirect methods often produce conflicting views about traffic congestion and/or delay." (BTS Transportation Statistics Annual Report – Chapter Two).

(please see Figure 2-7)

The increased traffic predicted to be on US 220 in the future is really not a significant increase. If the truth were to be admitted VDOT only performed the second traffic count because the counts fell short of any significant findings.

The Bureau of Transportation Statistics (Established by ISTEA) states:

"The Transportation Research Board's Data for Decisions (1992) and the first BTS Transportation statistics Annual report (TSAR94) laid out a group of questions about transportation, so that the appropriate data and information might be obtained. These questions remain important, reflect current issues; and need attention in order to determine whether the Department of Transportation's published strategic goals of enhancing safety, mobility, economic development and trade, the natural and human environment and national security are being attained (USDOT 1997)

Please review specific questions listed as Table 6-1.

Response: *Comment noted. The safety analysis conducted for this document was based on site-specific accident data developed from police reports. Comparisons are based on roadway classifications as they pertain to Virginia and therefore, are more corridor-specific than BTS data which is more national in scope.*

ECONOMIC ISSUES

Under the Build Options, 14-147 businesses have the potential of being displaced. This also is very significant in tax revenue. Under TSM only 1 business would be displaced. That alone would be a significant economic impact.

Response: *The relocation of a single business would not likely result in a significant economic impact because all impacted businesses would be compensated for search, moving and reestablishment expenses or be given an in-lieu of payment at their discretion. A business desiring to reestablish would be given 90 days to accomplish the relocation before their property was acquired. Therefore, any lost tax revenue from relocating businesses would be temporary and in some cases, non-existent, depending upon the timing for reestablishing the business at another location. It is noted that the build alternatives that upgrade the existing facility throughout would have the greatest social-economic impacts in terms of business and residential relocations.*

Estimates on acres of cultivated fields impacted under the Build Options reflect 1,203 – 2,241.

“According to the American Farmland Trust, farmland and open space actually provide a fiscal surplus for municipal governments. Although residential developments generate more total revenues than farmlands, forests and open space, residential land uses also require more in public services. The new result is that residential development produces a fiscal loss, while farmland, forest, and open space produce a fiscal benefit. This is a strong argument for managing growth and maintaining open spaces, including farmland.” (American Farmland Trust, Cost of Community Services Fact Sheet, <http://farm.fic.niu.edu/fic-ta/tafs-cocs.html>)

Based on the findings of the University of PA study entitled, Understanding Highway economics in the Twenty First Century, August 29,2000, it is evident that economic growth is not necessarily the result of an interstate highway, particularly in rural areas. In fact, new highway construction has experienced a diminishing rate of return since the 1960's and is now considered “negligible” at best. However, 40% more jobs are created by upgrading and maintaining an existing highway and we can expect up to a 32% rate of return on each dollar invested,” Resurfacing and widening projects contribute more to economic growth than new construction.” Options 1 and 1a are the most rural of all Build Options according to DEIS pg 4.2-15.

Response: *It is acknowledged that the ratio of benefits to costs will be lower in rural areas where farmland and forest land is prevalent and that there will be a diminishing rate of return. 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 for the entire alternative is still greater than one.*

The studies' primaries were: the Congressional Budget Office, Federal Highway Administration and Edward Gramlich of the Federal Reserve Board “According to Gramlich, highway investment is worthwhile only if the rate of return exceeds the interest rate.” VDOT has not provided a cost-benefit analysis which would be a highly effective tool in evaluating which choice would be most economically efficient. A cost benefit analysis would be relevant as an aid in further evaluating the merits of the choices available. NEPA and CEQ Regulation 1502.23 Cost benefit analysis states: If a cost benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, shall be incorporated by reference or appended to the statement as an aid in evaluating the environmental consequences...

Response: *The development of public infrastructure has historically been questioned both in regards to the role of government in these type of decisions and the engineering economy of the investment decision. Transportation capital investment decisions are often made under the rationale of both. The role of government is often championed as the provider of services that privately can not be established under the criteria of return on investment. Thus, it is commonly accepted that in matters of defense, public works and education, the state and federal government have a primary role. In general, the private sector has neither the capital nor the patience to realize the slow rate of return that public infrastructure entails. One of the first acts of the US Congress was to appropriate funds to construct a lighthouse in Virginia to aid in the safety of shipping and to promote commerce. The capital cost and the on-going maintenance of the lighthouse were secondary to the contribution of the lighthouse to the general welfare of the population.*

The benefits and costs of transportation investment are both direct and indirect and have been extensively studied since the mid-nineteenth century. The sub-discipline has been known as engineering economics and has been in place institutionally long before MBA and business economic programs. This literature can be traced back to the mid-nineteenth century with the classic texts of W. M. Gillespie in 1848 and A. M. Wellington in 1887. Growing academic interests in the 1920's increased

the body of literature on the economics of roadway investment. The American Association of State Highway and Transportation Officials (AASHTO) published the first discounted present value approach in 1952 and 1960. In 1977 AASHTO published A Manual on User Benefit Analysis of Highway and Bus Transit Improvements. The 1977 Manual is the seminal treatment of benefit cost ratio analysis for transportation projects. The DEIS, in section 4.12 (Secondary and Cumulative Impacts), references several large scale economic research endeavors that clearly and statistically link economic growth with highway transportation investment. There is a long standing history of highway investment projects where benefits exceed cost.

A recent VDOT/FHWA feasibility study for the TransAmerica corridor across the state clearly illustrated the economic and user benefit of transforming substandard rural arterial facilities to a higher standard. A benefit cost ratio analysis for the TransAmerica project resulted in robust B/C ratios and job growth impacts of approximately 69,000 full time equivalent jobs.

The conclusion that transportation investment in Interstate and other high end highways has less utility in terms of rate of return now than during the early 1960's should be no surprise to anyone. The same can be said of investment in computers, cell phones or cancer treatment technology. Declining rates of return on investment are expected as markets become saturated. Incremental increases under that scenario naturally exhibit a declining rate of return.

What is important is there is still a rate of return on highway capital investment. This is illustrated in Figure 3.2.1 as taken from the FHWA article "Contribution of Highway Capital to Output and Productivity Growth in the US Economy and Industries", by I. Nadiri, August, 1998. This figure compares rate of return on highway capital in ten year increments from 1960 to 1991. The fact that highway capital in 1991 realized just under a 10% return is remarkable. By definition, a public project that provides a positive return on investment not only adds value to public welfare but also exceeds the benefit cost ratio of unity, where the long term monetized benefit of the project exceeds the long term capital and maintenance cost of the project.

While capacity expansion of highway investment has slowed over the last decade the growth in demand has not. That trend, if not countered, has serious consequences on mobility, air quality and quality of life. It is important to note that VMT has historically increased in the last three decades at rates in excess of population or employment growth. This is a national trend and manifests itself statewide and locally and has no correlation with growth in roadway capacity. Nationally, VMT has increase 37% from 1984 to 1994. During the same period in Virginia, VMT increased 52%. During that same period, new construction adding roadway capacity has increased only 9% to 10%.

Nationally, VMT has increased 259% from 1960 to 1997, a pace that outstrips growth in fuel consumption, vehicle registration, population, and roadway capacity. The growth in VMT has occurred far ahead of roadway network capacity. From 1993 to 1999 in the Southeast, the 14 largest metropolitan areas exhibited an annual average growth rate in new roadway mileage of 1.3%. During that same period VMT grew at an annual average rate 3.4%. These statistics are corroborated in EPA's publication, *Indicators of the Environmental Impacts of Transportation*, which contain similar statistics. For example, the U.S. population has grown by 30%, the number of licensed drivers has increased 87%, and VMT has increased 125% over the past 30 years. During this same time, new highway capacity has only increased 6%.

Addressing the decline in highway capacity to handle the growth in travel demand can not be accomplished with maintenance measures. This was measured in the I-73 Draft EIS during the evaluation of the No-Build and TSM alternatives, neither of which were responsive to the project purpose and need. Congress realized this in the passage of the Intermodal Surface Transportation Efficiency Act of 1991 and the Transportation Equity Act for the 21st Century in 1998 where I-73 was identified as a high priority corridor.

The decision to advance one I-73 alternative over the other is a complex issue whose consequences reach beyond the accounting exercise of balancing life cycle user benefits over discounted capital and maintenance costs. Notwithstanding, in order to address public comment, FHWA requested a benefit-cost analysis for the alternative approved by the CTB. This information is included in the appendices to the final EIS. 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 crashes, 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%.

Keep in mind that economic development is just one need identified for the project. Although the rural areas do not have as high an economic development potential, the proposed project will serve as a link in the I-73 high priority corridor from Michigan to South Carolina.

Furthermore, there are no concrete examples of how, when, why or where I-73 will produce economic development. Quite the opposite side of the proverbial coin is evident after studying this document. The VEC report in 1994 shows how “service industry” (minimum wage jobs) will be generated at “interchanges”

“Secondarily, employers and developers will concentrate their investment around interchanges that link to such facilities all other things being equal such as educational base, quality of life, and cultural features of the area”. (DEIS, pg 4.12-4)

“Ultimately, economic development will depend upon the ability of the region to attract new or expanding businesses to the area. An improved transportation system and its link to retail markets will improve the attractiveness of the area to businesses, but it is just one factor that influences a business’s decision to locate to an area. Other factors include the availability of and distance to existing and planned residential development, environmental and quality of life factors, etc. In addition, construction phasing and the development of I-73 in other states is another issue that may effect the level of timing and economic development”. (DEIS, pg 4.12-4)

Thus, based on the vagueness and all the “assumptions” in the above paragraph, there is no concrete evidence that I-73 will do anything positive for our economic growth and vitality. This is proof that I-73 alone will not get the job done. Economic growth is based on a number of essential elements, such as residential development, a healthy environment and a quality of life as well as the meticulous timing of events in other states that must be strategically implemented.

Unless Roanoke’s Regional Airport can afford to expand its facilities and have more competitive rates, I-73 could do more harm than good. As estimated, travel time to Greensboro, and Charlotte areas, where rates are lower and there are more direct flights, would send customers seeking air connections elsewhere. Thus no economic benefit can be realized in this specific area.

Roanoke reportedly spent \$29,500 on it’s own “Economic Impact of I-73 Alignments on the City of Roanoke, Feb 2000” but the study lacks imperative information on employment, spending and tax revenues for the alternatives. For as estimated \$1.4 billion, I would need much more assurance than the

word “could” when describing economic impacts. (Pg 2-9 last sentence reads: “The 73 **could** influence the city’s economic base,...)

Build option 3 used the word “risks” when describing I-73’s impacts on Roanoke City’s economic development. Build Option 4 has the least opportunity for economic gains, but the least “risk” to the City. Build Option 1 has the greatest “risk” to the City. “Risk” according to Webster’s Dictionary is synonymous to “danger” and danger is just what this highway will bring.

Response: *We agree that an interstate facility is no guarantee of economic development; instead, it creates the potential. 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 in the study area have generally supported an interstate facility because of the potential associated with it. In fact, in March of 1994, after VDOT completed a 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.*

*Everyone can cite a stretch of highway in rural areas where development has not occurred and rightfully argue that an interstate is no guarantee of economic development. There are other factors that must be taken into account. 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. 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 and when development will take place, its nature and its intensity.*

The way in which VDOT has presented the results of the National Cooperative Highway Research Program’s study “seems” to reveal growth, but this is actually SPRAWL. Britain’s Transport and Road Research Laboratory, 1991, has stated:

“Moreover, unplanned growth has led to incompatible land use in sprawling urban areas and created significant driving hazards..

Also according to the Bureau of Transportation Statistics Annual Report Chapter 3:

“Property tax revenues are a far greater income source for local governments than motor fuel taxes.”

Response: *Roads are not constructed with the intent that the motor fuel taxes will be a income source for local governments and as such, it does not figure into decision making. It is logical that property tax revenues would be a greater income source for a locality than motor fuel taxes since property tax revenues go directly to a locality while motor fuel taxes go to the state and federal governments; some of the revenue from motor fuel tax may make it back to the locality in the form of increased services or projects or in some cases, as direct revenue. However, there is no trade off. It is also recognized that a transportation system is integral to the economic vitality of an area and property that has better access to a transportation system also has higher value which produces greater tax revenue than land with limited or indirect access to the transportation system.*

Obviously, when a “bypass” is constructed, the established businesses must relocate in order to remain “vital”. Consequently, one must question the lost revenue of businesses who are unable to relocate and thus forced to shut down as well as the lost tax revenue while they are in transition.

Response: *All impacted businesses would be compensated for search, moving and reestablishment expenses or be given an in-lieu of payment at their discretion. Businesses desiring to reestablish would be given 90 days to accomplish the relocation before their property was acquired. Therefore, any lost tax revenue from relocating businesses would be temporary and in some cases, non-existent, depending upon the timing for reestablishing the business at another location. For example, a business could continue operating at its existing location while reestablishing at another location, minimizing the amount of disruption it would experience.*

VDOT states “ Traffic patterns will change dramatically, as will the rate of the U.S. Route 220 for commuters. The current growth of highway oriented businesses along U.S. may be altered by the impetus to locate businesses and services at future Interstate interchanges” (DEIS pg 4.12-5) additionally, concerning Option 1, “While this alternative promotes regional growth, it would likely attract commercial investment trade and tax dollars away from existing businesses in the City.”(DEIS pg 4.12-8). “The temporary reduction in the economic base would be offset by the relocation of displaced businesses. In addition, the attraction of new businesses to vacant properties along the corridor would result in increased tax revenues and more employment opportunities following construction” (DEIS pg 4.15-2)

Sprawl costs us all. As our open spaces are developed we require more buildings, leaving more vacant buildings behind), infrastructure, and utilities which are passed along to the citizens by means of tax increases impact and user’s fees. As the tax base shifts from it’s center to outlying areas, the burden of cost is shifted to the ones who can least afford it. It has been proven time and time again that is more efficient to upgrade and enhance what already exists.

“First, we must recognize that the cost of providing public services.

To low density, sprawl developments contributes to the growing fiscal stress among governments. Economic development activities of one’s neighbors can have significant implications for one’s own residential development... and if it is the case that residential growth is accompanied by costly fiscal consequences, then business development in a neighboring community has been found to indirectly place added pressure on residential property tax rates.”(Wm H. Oakland and Wm. A. Testa, does Business Development Raise Taxes...An Empirical Appraisal, Chicago,IL Metropolitan Planning Council, 1995, p. 4)

Increasing property tax rates will have to be imposed to pay for the growing costs of providing public services. Such an example exists in Loudon County, VA.

“The annual tax rate increased from \$0.99 to \$1.06 per \$100 of value in 1997, and to \$1.11 in 1998 in order to pay for new schools and services.” (Eric Lipton, “Once Rural Virginia Communities Pulled into Northern Megalopolis,” Washington Post, January 23,1998,p. B1.

Response: *It is interesting that all of the ‘sprawl’ and resulting increases in property taxes has occurred without any major additions or improvements to the transportation system in Loudoun County. Notwithstanding, many areas in Virginia have struggled with the problem of trying to keep up with growth and development; often time, the transportation system fails to keep up with growth and development as evidenced by statistics included in EPA publications as referenced above. The U.S. population has increased 30% in the last 30 years but highway capacity has only increased 6%. As the population grows, areas must accommodate the growth by developing land and providing for the residential, educational and commercial needs of the growing population. If an area is also growing economically, then there will be a compounded effect on the growth in population as people move into the area. As a result, there is not only a need to accommodate the general growth in the population but a need to*

accommodate the growth in population due to increased employment opportunities in the area. Unfortunately, instead of anticipating development and responding to it by planning for it, decisions on roadways are often reactive.

It is not a foregone conclusion that property tax rates will increase and not appropriate to compare what may happen in the Roanoke-Martinsville area to what has happened in one of the fastest growing counties in the country. As property values increase, the amount of tax revenues coming into a locality will increase even if the tax rate stays the same. Local elected officials are responsible for decisions related to property taxes and they have to weigh the pros and cons related to tax rate increases.

ENVIRONMENTAL JUSTICE CONSEQUENCES

I wish to point out to VDOT that they have erred in their attempts to identify and properly inform all the minorities. I do not believe federal priorities regarding compliance with environmental justice have been met. There is a significant population of German Baptists concentrated in Franklin County. The greatest number of whom live within the area of the Eastern alignments in northern Franklin County. According to historical documents, the German Baptists' first permanent settlement in Franklin County was around 1765. By the early 1870's their numbers grew to necessitate a second church near Boones Mill. Presently, there are three "Old Order" churches in Franklin County, Mountain View, Oak Hill and Pigg River. There are approximately 196 adult church members at Oak Hill, 125 at Mountain View and 105 at Pigg River.

After reviewing tax maps of Franklin County it was brought to light that these people own an estimated 3,084 acres, just in the northern end of Franklin County. (Please see attached maps, 11,17,8,27,30,35,36,42,45, &62).

Please note that I did not fully research and identify the entire county and there are also large acreages elsewhere in the county within the other possible corridors, many of which are farms. Also, I must make it perfectly clear that I personally, am responsible for identifying this matter, I was not asked to do so by the German Baptist people. The German Baptists do not believe in getting politically involved as they do not vote, but as tax-paying citizens. I felt the need to see that this population gets fair and equitable treatment under the fullest

Extent of man's law... A great number of these people are farmers and losing their land and/or having it fragmented or downsized, would mean the loss of their source of incomes. Boones County Store is also a popular business on Rt. 116 which would be lost as well as their church, Oak Hill.

"The Brethren were convinced that a creed or doctrinal statement with the force of law, would stifle the further development of the church. They preferred to discuss doctrinal matters at their annual meeting. They were nonresisters, subscribing whole-heartedly to the ancient Christian stance against violence and war. They advocate the simple life, with emphasis on plainness, humility, and wholesome living." (Franklin County Virginia 1786-1086 – Bicentennial History, John S. Salmon, Emily J. Salmon, 1933, p. 189-190.)

Due to their religious beliefs, they do not own televisions, radios, or subscribe to the Internet. Many do not subscribe to newspapers. They have received no direct information from VDOT. The only information they have obtained is strictly by word of mouth and thru the three informational meetings that we the citizens have instigated, arranged, and invited VDOT to attend. These meetings were held in Cooper's Cove on October 5, 1998, Red Valley, October 26, 1998 and Burnt Chimney, December 10, 1998.

Noteworthy, was the Red Valley Community meeting in which no actual VDOT members were present, instead Mr. John Lambert, public relations, from Lambert & Associates, was sent as our guest speaker. Mr. Lambert made it clear that he was no "Road Scholar" but if he could not answer the questions

adequately, he would see that someone at VDOT would...true to his word, the majority of the meeting consisted of a legal pad being passed around for each person's inquiry, name, address and phone number. I saw this as very inadequate and unprofessional on behalf of VDOT.

Response: *Based on the Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," the German Baptist agricultural community is not considered a protected population under the auspices of environmental justice. Notwithstanding, in responding to VAR's claims that the German Baptist community represented a property eligible for protection under the National Historic Preservation Act, the German Baptist brethren were interviewed extensively regarding their beliefs, practices, and farming community.*

NOISE

According to the Bureau of Transportation Statistics:

"No national-level data have been available that qualify exposure to highway or railroad noise." The transportation system created pervasive noise, degrading the quality of life to those exposed. Primary sources are aircraft LTO's and traffic moving along highways and railways. Although there are no national trend data on noise, national standards have been developed by FAA for aircraft and by EPA for medium and heavy highway trucks, motorcycles, locomotives and railcars. At 65dBA noise becomes annoying; 128 dBA is the pain threshold (USDOT BTS 1996, 151). Highway trucks manufactured after January 1988 are subject to a maximum rating of 80 dBA.

The standard for motorcycles varies from 70 to 82 dBA depending on the model year..." (BTS Transportation Statistics Annual Report-Chapter Five).

With the above data in mind, (65dBA, graded as "annoying" level.

"It is VDOT policy to subtract 20 dBA from those receptors that can maintain closed window conditions." (DEIS pg 4.4-27)

After factoring in VDOT's formula, these levels are extremely and seriously above the "annoying" level and well on the way to "painful". Incidentally, not everyone will be confined to "closed window conditions" 24 hours a day and it would be ludicrous to suggest that they would be. The proposed noise barriers are, as VDOT pointed out, not cost effective, nor would they be aesthetically attractive.

Response: *Noise impacts for I-73 have been assessed in accordance with FHWA procedures published in 23 CFR 772. VDOT's noise abatement policy is consistent with FHWA's regulations. Future and existing exterior noise levels were compared to FHWA's Noise Abatement Criteria. These guidelines identify land use categories and establish an abatement criteria based on the activity associated with various land uses. Land uses within the study area were reviewed and receptors were identified. Future proposed land uses in the study area encompass land use activity Category A (Appalachian Trail) which establishes 57 dB(A) as the exterior noise level threshold and Category B (residences, churches, schools, hotels, etc.) which establishes 67 dB(A) as the exterior noise threshold. In addition, receptors such as schools, churches, museums, libraries, and auditoriums were also identified and were analyzed for interior noise impacts using land use activity Category E which establishes 52 dB(A) as the interior noise level. VDOT's policy regarding the subtraction of 20dBA from predicted noise levels is actually an FHWA policy, and it only applies to interior noise impacts. Therefore, this reduction was applied only to those receptors that could maintain closed window conditions.*

Further, based on FHWA regulations for calculating noise levels, the worst hourly noise conditions are used, and all decisions are based on it even though those conditions are not expected throughout the day. The noise model averages the noise over that one hour period. This average is known as the equivalent sound level (Leq), and it is a single number, which represents the same sound energy as the time-varying sound evaluated over the worst-hourly noise conditions. While the determination of noise

impacts is not based on a peak noise level which may only last for a few seconds, it is based on worst-hourly conditions which do not last all day. Therefore, the noise level used for purposes of decision making as it relates to interior noise is obtained by subtracting 20 dB(A) (minimally; it could be more depending upon the type of building construction) from the Leq noise level and not by subtracting 20 dB(A) from the maximum noise level that a single vehicle, say a truck, may produce. This is discussed in greater detail in Section 4.4.4.3 (Interior Noise) of the document.

Finally, Virginia has an extenuating circumstance clause in its Noise Abatement Policy that allows noise barriers to be constructed even though they have been found to not be cost-effective. These decisions are made during final design on a case-by-case basis.

Noise also contributes to the Ecological Impacts of Highways, Dr. Richard Forman, a landscape ecologist at Harvard Design School has done research on the impacts that noise has on birds and their nesting habits. Dr. Forman had found that density and diversity of birds to be one-third lower in traffic noise zones than in other areas. It is believed that highway noise tends to “muffle” and thus interfere with the communication of the birds. It is stated that the effect of traffic noise can extend more than half a mile over grasslands. (Forman, Richard, T. 2000. “Estimate of the Area Affected Ecologically by the Road System in the United States, “Conservation of Biology 14 (1); 31-35).

Response: *Comment noted. The noise analysis conducted for the I-73 project has been performed in accordance with FHWA’s regulations at 23 CFR 772, which provides procedures for noise studies and noise abatement measures designed to protect the public health and welfare. FHWA has not established a criteria for noise impacts to birds or other wildlife and as such, would not be able to assess noise impacts from a regulatory standpoint. VDOT’s noise policy assesses noise impacts within 1,000 feet of a roadway because after that, noise levels drop off dramatically and dissipate.*

EMERGENCY RESPONSE TIME

Under TSM, only “slight” decreases in response times would be noticed and in fact:

“Increased safety improvements would be expected to result in a decrease in the incidence of emergencies.”

“As improvements are made and the residences and emergency personnel become more familiar with the changes to access, delays would be reduced.” (DEIS p. 42-2)

It was quite alarming, on the other hand, to see that under Option 4 in Franklin County:

“Red Valley Rescue and Burnt Chimney Volunteer Fire Department would be able to assist emergencies on U.S. 220 faster than the Boones Mill Fire and Rescue team during certain times of the day.”

This would be a gross error of judgment in terms of both safety and emergency response time.

Response: *The discussion of emergency response times in Section 4.2.1.3 (Build Alternatives) of the document has been clarified in the FEIS. The Boones Mill Fire and Rescue would be able to respond faster to emergencies along U.S. 220 (within its service area) than other fire and rescue facilities. Utilizing segments 118, 118B and 400 to access U.S. 220, Red Valley could provide support to Boones Mill for areas between Boones Mill and Buck Mountain. Improved emergency response time will be evident for both Red Valley and Burnt Chimney Fire and Rescue as both will have high speed Interstate access to north and central Franklin County east of U.S. 220 as opposed to the rural secondary highways currently available to them.*

SOCIAL IMPACTS

With the recent Annexation to the town of Rocky Mount, the tax base has already begun to shift. Especially in the Hodgesville area, where the older long-time residents who are now officially on the

Town. They will be forced to either pay hook-up fees for Town water and sewer or face the non-compliance fees. Depending on where the nearest intersection is to be in relation to them will decide whether their travel times are enhanced or not. Therefore, I strongly question the theory of "improved travel times to regional elderly services", (DEIS pg.4.2-10). For in many cases it will actually, in fact, lengthen travel times.

"Transportation can have large social impacts on minority populations, those of various ages and income levels and persons with disabilities. Specific details about traveler characteristics and persons affected by transportation are required, in order to investigate many social concerns." (BTS-Transportation Statistics Annual Report-Chapter Six. <http://www.bts.gov/transtu/tsar1999/chapo.htm>).

Under the various Build Options, anywhere from 1-13 Churches would be taken Churches serve as a major activity for the population. This would put added pressure and travel time for all citizens, especially the elderly. Under TSM, 0 churches would be taken. Another troublesome point is the statement "existing U.S. 220 Bypass already serves as a barrier to social interaction between the two sides of the roadway." (DEIS pg.4.2-10). I have seen no evidence of this and would need more reliable, concrete evidence to back this up.

Response: *The Route 220 Bypass around Martinsville is a "barrier" in that access across the facility is only provided at a limited number of locations and it serves as a barrier to pedestrian travel unlike lesser type of roadway facilities where families and individuals can more readily interact with their neighbors across the street. It is acknowledged that the build alternatives that improve the existing corridor have the greatest impact on churches. These churches would be relocated in accordance with VDOT's right-of-way acquisition and relocation program while minimizing inconveniences to the congregation.*

SCHOOLS

I was told by Ray Varney at the Roanoke Public Hearing that with one of the Build Options, the highway would come within 3,500 feet of Burnt Chimney Elementary School and within 2,200-2,300 feet of the proposed new site for the elementary school just off Rt. 116. If that be the case, a noise barrier would need to be erected around our school for protection. It is very sad to think that our young children would have to contend with a "prison-like" setting. Every time I pass the elementary school near Valley View Mall, with the wall around it, I am reminded that the "open-air" atmosphere that we enjoy now could be taken away. (Mr. Varney measured the distance for me from the aerial view map.)

Response: *As discussed in Section 2.3 (Build Options that Address Purpose and Need), noise impacts were only evaluated up to 1000 feet on either side of the candidate build alternatives. The drop-off rate associated with highway traffic noise would make it very unlikely that noise impacts would occur beyond this distance. Therefore, no noise barriers have been considered for the Burnt Chimney Elementary School.*

FARMLAND

Again TSM is by far the best choice to preserve our valuable farmland. Our farmers in Franklin County, have already had their land downsized, bisected, and taken before when 220 was built. Let's not put undue burden on them once again. Build Options 2a, 1, 1a, 2, 2b, and 2c have the greatest impacts on farmlands. Again I refer to the German Baptist sector who strongly rely on Farming as their source of income. They have farmed for years and this is their livelihood.

About 38% of the total land (442,995 acres) in Franklin County is devoted to agricultural production this represents about 166,447 acres.

" This land bank of agriculture use provides great natural beauty of the community. Agriculture is a component of the County's economic diversity...

*As of 1998, Franklin County is the second largest dairy-farming county in Virginia...

*The number of workers in Franklin County who worked in "farming" increased between 1980-90 from 947-986, a 4% increase, and represented 5% of the total workers in the County (20,091) in 1990. This figure is 2 ½ times the representation of "Farming" in the statewide VA economy (2% in 1990).

*49.3% of farms represent the principal occupation of their operators (461) and 50.7% are part-time farmers (474).

*555 farms are fully owned by their operators, 321 are partially owned and 59 represent tenant farmers.

*of 95 Counties in the State, Franklin is a strong agricultural competitor, It was:

#9 in yearly avg. Cash receipts (\$40,121,000) 1992.

#3 in tons of corn silage produced (1997)

#7 in tons of all hay produced (1997)

#8 in pounds of flue-cured tobacco produced (1997)

*At the same time the economic strength of farms remains;

The total Value of Farm products Sold has increased since the early 1980's (1982) from \$31,641,000 to \$40,121,000 in the early 1990's (1992) (27%).

*Of the 935 farms in 1992, 9 had sales above \$500,000 and 105 had sales between \$100,000 - \$500,000." (Agriculture in Franklin County, website: <http://franklincountyva.org/ag.htm>)

Response: *Your comments on agriculture in Franklin County are noted. Information of impacts to farmland and lost revenue has been included in the DEIS. While the TSM Alternative would require minimal amounts of acreage to be removed from farmland production, it does not compare favorably to the other alternatives under consideration in addressing all of the components of the purpose and need. It is further added that despite its great natural beauty, agricultural practices in the study area are cited as one of the greatest threats to the federally endangered Roanoke logperch because of their impact on water quality.*

SUMMARY

Number one priority under VDOT's Mission Statement is:

*We will maintain the public trust, and treat public dollars with the utmost care.

Also listed as a main focal point is their Mission statement is:

*We enhance economic opportunities while preserving the beauty, natural resources, and heritage of Virginia.

After reviewing the information contained in the DEIS I feel the only reasonable sensible alternative to ensure that taxpayers dollars are invested wisely and the greatest amount of economic opportunity results from this investment is thru the implementation of TSM. TSM would fulfill the requirements under ISTEA's approach to emphasizing preservation, improved use of existing roads and funding to reduce congestion and air pollution.

Response: *Comment noted.*

Respectfully submitted,
Dana F. Taylor

Document Submission

For: VDOT and the CTB
Re.: Proposed 1-73
Date: 12/13/2000
From: Clark M. Thomas

Ladies and gentlemen of VDOT and the CTB,

Attached herewith is a twelve-page document I prepared in September of this year relating to the proposed 1-73, and commenting on the consultants' study presented to the City of Roanoke in January of 2000. (The consultants' study was referenced in the DEIS)

Briefly, the document addresses economic development, concerns in the Roanoke and Martinsville areas. It proposes, a cost-effective solution for the challenges ahead, and it envisions the 21st century business environment.

Thank you for considering this document.

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Roanoke's Two Futures

By:

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September 2000

Introduction

Several years ago a few promoters in Roanoke and Martinsville led the Roanoke Valley business community and some politicians into supporting a major highway project paid for by government funds, but benefiting primarily themselves and out-of-state trucking, interests. What they failed to reveal was how their new terrain highway would bleed the economic and social vitality of our valley. The devil's in the details. If they had told the whole truth this document might not be necessary.

In 2001 important decisions will be made about the future of our valley. Citizens are at last asking probing questions that should have been asked years ago. In this new century we can choose to embrace a vision for our valley that will benefit us all, or surrender our valley to the bulldozers and out-of-state truckers. .

This position paper shows how we can optimize real economic progress, help our neighbors in Henry County, and still keep our community safe from destruction masquerading as progress. We will show how maximum efficiency will be achieved by a less expensive option. We will show how valley business can be stimulated in 21st century ways that don't require thousands more soot-belching trucks rumbling through the heart of town.

"If it Can be Built, it Should be Built"

America was built in the 19th century on the idea of Manifest Destiny. "Empty land out west needed to be a civilized" with roads and rail roads, towns and cities-and millions of unmarked graves of "heathen Indians" whose only crime was to get in the way of "progress."

Throughout most of the 20th century progress was simply defined: "If it can be built, it should be built." We didn't care that the western frontier was officially declared gone in 1890. Our modern economic frontier would never end, and it could extend even to the vacant lot next door. Progress was seen in terms of steam and trucks, industrial smoke stacks, and ever higher skyscrapers. Quantity equaled quality.

Jobs that were created by rail and truck traffic still are critical to the economy. Martinsville, for example, was created by rails, not by trucks. All of this was cozy when we lived in Fortress America. Then along came the rest of the modern world, with new wage, competition from NAFTA countries, from Europe, Japan, and China. It isn't enough to have trains and trucks nearby. Those same trains and trucks can also deliver cheap foreign goods to our local Walmart. Martinsville's labor intensive economy was damaged not because they lacked an interstate, but because foreign textile wages are so much less than domestic wages.

Ironically, even though it is tempting to think of the railroads as historically creating jobs, the Martinsville area is still benefiting from this source. The Summer 2000 issue of the Virginia Economic Development Partnership reports how Nylstar has recently announced its decision to create fifty new jobs in Henry

County as the company acquires Amfibe, a textile yarn production company located there. The company will retain Amfibe's 200 employees - and invest \$44 million in expansion efforts. Virginia had competed with Canada and Mexico for the investment. The company also qualifies for rail access funding from the Virginia Department of Rail and Public Transportation.

Even when a new highway is built this fact alone does not guarantee an economic renaissance. Clifton Forge is next to I-64, but it is also very depressed. Clifton Forge's dubious claim to fame has been the nearby Kim Stan landfill, created by nasty refuse trucked in along I-64 from the Northeast. Across America there are hundreds of Clifton Forges where a better life rolls on to distant metropolises.

Response: *We agree that an interstate facility is no guarantee of economic development. 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. In fact, in March of 1994, after VDOT completed a 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. 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. Factors like these and their complex inter-relationship help explain the situation in places like Clifton Forge.

At the same time, there are many examples of cities and towns lacking interstates which are extremely vital. Lynchburg is a dynamic city that is definitely not whining for a new interstate, even though the Route 29 corridor is a logical candidate for upgrading. Lynchburg is prospering precisely because their economic mix has been less vulnerable to foreign competition than Henry County's.

Response: *Lynchburg may not be "whining" because they are in the process of building a 12-mile, four-lane, fully controlled bypass (i.e. access will only be provided at interchanges) around the city to principle arterial standards for freeways which is the same standards I-73 would be designed to; existing Route 29 through the city no longer serves their needs and hinders economic development. However, they, as well as other cities located south of them on Route 29 like Danville, have repeatedly expressed concerns over the impact that congestion on Route 29 in Charlottesville and Albemarle County has had on their ability to compete economically with other regions in the state. They have repeatedly passed resolutions supporting transportation improvements in the Charlottesville area and complained that the condition of Route 29 through the Charlottesville area (which is severely congested with local traffic because of the uncontrolled growth and number of access points) has stifled their economic growth and viability. It has been such a concern for them that the political delegation representing these areas supported legislation in the General Assembly to force the City of Charlottesville to address the problem by building a bypass.*

Further evidence of the concern that localities located along Route 29 are not served by a transportation system that fosters economic development, the City of Danville has pushed for an upgrade of Route 29

to interstate standards for some time, believing it would serve "as the areas supercharged 12-cylinder economic engine..." Former mayor, Linwood Wright stated, "We need to be visible on an interstate highway map. Its what most business site planners use." Danville and a coalition of other cities and counties recently pushed Congress to designate Route 29 as Interstate 785 because it would bring the promise of significant revenue." (Daily Progress, June 9, 2004).

What is the future for Martinsville and its neighbors? Already the rational marketplace is moving to fill some of the void left by departing industries. Even though many of the 19th century employers have left, Martinsville's twin capital assets of empty factory buildings and a 17% unemployment rate are a magnet for other firms seeking to expand in a low unemployment national economy.

A prime example of good things happening despite political fantasies is the recently announced expansion of National Catalog Corporation, an order-taking and shipping business, which will create 875 jobs in Martinsville and Henry County. This is their third expansion since coming to Martinsville in July 1999. Significantly, these jobs are available this year, not in twenty years. They have nothing to do with any wished-for interstate highway. These jobs have everything to do with the emerging information - highway, since 40 percent of National's business is conducted over the Internet.

Response: *No one has argued that economic development wouldn't occur in the absence of an interstate facility.*

America's smartest and wealthiest communities are learning that the brightest future is not reached by lurching backwards into the past. There are countless examples of vibrant economies not built on new terrain highways which grow by seizing emerging opportunities in the world economy. Look at the incredible vitality of San Francisco, of Silicon Valley, and of Manhattan. All of these areas are devoid of extra land to build new highways and to sprawl. Their success is linked to electronics, not diesel soot. Even northern Virginia is growing rapidly with congested roads. All are prospering not because of new interstate highways, but despite them.

Response: *Cities like Manhattan and San Francisco would not exist as they do without their transportation systems. You can't take Manhattan or San Francisco in isolation and make apples to apples comparisons to the City of Roanoke. Whereas the development in the Roanoke area is generally confined to an area not much larger than 43 square miles, Manhattan and San Francisco is surrounded by extensive development that extends in every direction for miles. Therefore, while the core of Manhattan may be devoid of extra land, development has moved out and continues to move out radially from the core in all directions into New York, New Jersey and Connecticut. The high-paying jobs that can be found in Manhattan require an immense and extensive infrastructure of support in terms of roads, buses, trains, water and sewer lines, residential and commercial development, public facilities, and so on. New roads are being built, existing roads expanded, and new development erected the further you move from the core. Therefore, areas like Manhattan aren't succeeding merely because they have reinvented themselves into a telecommuting center. When it comes to interstate facilities, Manhattan is currently served by Interstate 78, 87, 95, 278, and 495, and these facilities are packed daily by commuters; the congestion in New York City is legendary. As for Northern Virginia, the area may be "prospering", but not without generating or exposing widespread transportation needs. Northern Virginia is like most areas in that improvements in the transportation system have not kept up with development. Statistics published by EPA in their publication, Indicators of the Environmental Impacts of Transportation, bear this out. In the last 30 years, the U.S. population has grown by 30 percent, the number of licensed vehicles is up 87 percent and vehicle miles traveled have increased more than 125 percent. In this same time frame, new highway capacity has increased six percent. So, while you may believe that "prosperity" is occurring in Northern Virginia in spite of the interstate, many recognize that this prosperity isn't what it could be and that it will not continue without widespread improvements to the transportation system. Currently, in order to keep up with "prosperity", numerous projects are being studied on the interstate system including the widening of I-66 outside the Beltway for 25 miles, and the widening of the Capital Beltway (I-495) for 14 miles. VDOT is also conducting a feasibility study for the*

widening of I-66 inside the Beltway. In addition, other studies are being conducted for major principle arterial facilities like the Tri-County Parkway (a four to six-lane, limited access facility on new location). Major construction includes the I-495/I-395/I-95 interchange in excess of \$670 million and the replacement of the Woodrow Wilson Bridge (I-95) in excess of \$2.4 billion.

Manhattan is an economic marvel beyond compare. Yet it occupies only 23 square miles, a good chunk of which is Central Park. That tiny patch of real estate houses a million and a half people, plus hundreds of thousands of high-paying jobs. Roanoke City alone is nearly twice the size of Manhattan. Roanoke's 43 square miles is adequate for all the economic growth we can envision, while still maintaining a high quality of life. Roanoke does not need population growth for the sake of growth. Roanoke needs quality economic growth for the sake of a quality community on a human scale. Let us be a small and brilliant diamond, rather than a large chunk of glass.

Just as the world economy has become more efficient because of instant communications over fiber optic networks, and because of crumbling trade barriers, so too America's economy has become more efficient as savvy businesses outsource work to achieve greater productivity.

It is just as easy for one knowledge worker to log on to the corporate mainframe from a desktop computer in Martinsville or Roanoke as it is for another knowledge worker to log on from within the headquarters in Vienna, or Manhattan, or wherever. As far as a central computer is concerned there is no difference when remote workers communicate via broad band connections equal in speed to in-house intranets. What counts is the work that is done-and that work can be done without generating pollution from anywhere.

Both Henry and Roanoke counties stand to gain from this emerging revolution in how business is conducted, if only our political and educational leaders have the courage and wisdom to foresee our creative future, and to nourish it with enlightened civic policies.

How to Kill the Magic

In the 19th century passenger pigeons were so numerous that people shot them for fun. Then suddenly they all disappeared. What happened? Passenger pigeons needed a critical social mass to survive as a species. This concept of critical mass is not unique to pigeons. It underlies the essence of what makes a society or ecosystem vital. It underlies what makes for a great town to live in, or a poisoned place where people are itching to leave.

Several decades ago Roanoke City was the big magnet. Some called it the Magic City. It was also the Star City of the South, proclaimed the merchants in 1949 when they erected our giant pop icon. Our slogan was "From acorn to oak, that's Roanoke."

With the advent of better local roads and available cars after World War II the monolithic downtown shopping area saw its first defections to Sears Town, and then to Crossroads Mall and Towers Mall. Sprawl accelerated in the 1960s as bus lines were abandoned in favor of cars that only needed individual parking spaces.

At the same time Roanoke County was the new refuge for those who felt they needed "space" free from certain populations left in the core city. Little did these early migrants suspect that large areas of their own county would soon urbanize. This set the stage for today's threat: sprawling into Franklin and Bedford Counties.

If you were to fly a small plane from Danville to Roanoke you would be impressed by all beautiful farm fields east of the Roanoke Valley. The green terrain is rolling and inviting, not mountainous. Smith Mountain Lake glistens and beckons. Flying over the ring of mountains embracing Roanoke leads one

into a busy bowl of homes and businesses interlaced with many local roads, and sometimes hazy with air pollution.

What you will not see in such a flight is an easy way to get from Roanoke to the lake, or to open areas in the east. Today's travelers must brave either the twisting Hardy Road, or the equally treacherous Route 116 over Windy Gap. Wouldn't it be wonderful if we could smooth out those curves and glide over the Blue Ridge on a new interstate highway?

The answer to that question is both yes and no. It is absurd to claim that any major public works project would be 100% good, or 100% bad. As with most things in life there is a mixture of good and bad. The real question goes beyond platitudes into the area of how much is good, and how much is bad-and from different perspectives.

From the perspective of land speculators in Franklin County a new terrain interstate paid for by somebody else is nearly all good. From the perspective of the Roanoke Valley such a pork path would devastate business neighborhoods and residential neighborhoods.

As individuals sold their city and county homes for larger lawns in new Franklin suburbs, entire neighborhoods would rapidly decay. Residential tax bases for Roanoke City and County would be diminished, hampering the ability of both governments to serve their remaining residents. Also, most of those moving eastward would be younger and upwardly mobile, leaving behind more seniors with fixed incomes and increasing demands for government services.

As individual retail businesses leave the decaying valley to pursue the hot new population centers, and to avoid the less desirable core valley demographics, the business tax bases for Roanoke City and County would suffer.

Not every enterprise in Roanoke would suffer from the change. Any agile business that can extend the geographical range of its services could prosper. However, these enterprises would be in the minority.

The direct effects of a new terrain road bulldozed through a developed valley would be immense. To begin with, the sheer amount of land to be seized would approximate one square mile of the very best land. Within the seizure zone the effect would be as if a nuclear blast had been set off. At the same time the intense "fallout" from such construction would adversely affect several additional square miles of our valley adjacent to the corridor. VDOT is required to buy properties within construction corridors-but they aren't required by law to pay even one penny to victimized homeowners whose bedrooms are immediately outside those corridors. In plain English, if your bedroom ends up a couple hundred feet from thousands of loud trucks... TOO BAD!

Response: *The FHWA has developed procedures to analyze and abate highway traffic noise as published in 23 CFR 772. VDOT is required to use these procedures for impact and abatement analysis for any proposed Federal-aid highway project. Therefore, VDOT is required to consider abatement measures when noise impacts are identified, and those abatement measures must be incorporated into the project where reasonable and feasible to mitigate noise impacts associated with the construction of the proposed I-73 Interstate. Noise impacts and abatement measures are discussed in greater detail in Section 4.4 (Noise) of the DEIS.*

Our wonderful valley has won five All-American City awards. Recently a comprehensive study rated the quality of life in Roanoke's metropolitan area among the top twenty of all communities in America, higher even than anywhere else in Virginia. We achieved these honors without I-73.

Response: *But they were achieved with Interstates 81 and 581.*

How Best to Energize the

Roanoke Valley's Economy

There are many paths to prosperity. There are also many roads to ruin. The trick is to achieve permanent prosperity without ruining what is truly good for the community.

Following are ten economic development standards to help us successfully accommodate the future:

- (1) Industry should not pollute.
- (2) Industry should not discriminate.
- (3) Industry should respect neighborhoods.
- (4) Industry should support civic and nonprofit organizations.
- (5) Industry should pay excellent wages, with benefits.
- (6) Industry should partner with educational institutions.
- (7) Industry should be cost-efficient and competitive.
- (8) Industry should be as green as possible.
- (9) Industry should synergize with other valley industries.
- (1 0) Industry should have a vision of future possibilities.

The above list is not all-inclusive, but it does point to the core organic relationship among all individuals, businesses, and civic institutions in the valley. Many of these relationships cross municipal boundaries. The Roanoke Valley in the 21st century must learn to think holistically. If not, our valley could soon become a "hole" surrounded by a ring of prosperity.

Most businesses in our valley are in tune with the above list. Problems occur when businesses are not beholden to their communities. This recently happened in Martinsville when large corporations, doing business overseas sacrificed Henry County jobs for corporate profits. However, those corporations were not evil in the classical sense, since they were responding to a highly competitive global marketplace. Only Tultex tried to hang on, and they went bankrupt.

A successful growth strategy for our 21st century Roanoke Valley will recognize the dual needs to engage with the world economy and to insulate ourselves from forces in the world that would damage us.

One key to this strategy is to encourage industries with what Warren Buffett calls "moats." These are industries where barriers to competition are high, so the industry is partly insulated from disruptive market forces associated with one's products becoming generic.

Every organic gardener knows the secret to having a productive garden is a variety of plants. If a pest successfully attacks one plant, that pest will probably leave other garden plants alone. In contrast, agribusiness employs monoculture (such as millions of acres of Iowa corn), risking widespread disaster if that one crop fails. This strategy has worked well for our valley. Our excellent mix of industries has kept opportunity here, even when one industry is downsizing. This diversity should be encouraged in the future.

Here are a dozen action steps that will help strengthen our valley:

(1) Developing a variety of businesses with Buffett-style moats is not accidental. The valley should strategize with surrounding counties to develop a synergistic plan to attract 21st century green industries with deep moats paying lots of greenbacks.

(2) We should never lose sight of the need to embrace and encourage small businesses, even one-person businesses. Many excellent businesses have started out very small. Apple Computer started out in a garage. Not every small business needs to grow, however. A healthy business environment will have

a variety of small businesses affording many life choices for owners of those small businesses and their families. Roanoke's farmers market is an excellent example of the small-is-good option.

Empty space in an old office building or warehouse is an opportunity to incubate the future. Older space is generally less expensive. New businesses with tentative cash flows need affordable spaces to get started. Valley governments and philanthropic entities need to identify and promote emerging business opportunities, even to the point of helping them get started financially. Roanoke's New Century Venture Center is one excellent example of and model for helping incubate small businesses.

(3) The conversion of part of the old N&W offices into the Higher Education Center will be a key component in our 21st century success strategy. Let's not forget the contributions of Hollins University, Roanoke College, Virginia Western Community College, National Business College, and the other educational institutions in the valley. Ideally, they would all coordinate and cooperate as much as possible for everybody's benefit, which each school developing synergistic programs based on their unique strengths.

(4) Businesses and neighborhood groups need to establish an ongoing dialog. We are different fish sharing a common fish bowl. Wise businesses have learned how to give stock options to workers, who then develop pride of ownership in their place of employment. Wise businesses also know that good community relations leads to higher worker productivity. It is not good community relations to support the permanent degradation of a community's livability, even if short-term construction profits are in view.

(5) Downtown Roanoke is a rare success. It is a major part of our magic. We are still the Magic City, but not in the old, smoke-stack way. We are magical because we have found a beautiful mix of nostalgia and the new. Tourists and conventioners are attracted to our town not because we have interstates here, but because we have a friendly metropolis blending old and new. Tourists come to see our scenic beauty, along with our zoo and our science and transportation museums. Tourists gazing downtown from the star would be turned off by the sight and sounds of diesel-smoke-belching interstate trucks at the base of Mill Mountain.

(6) Talented knowledge workers will constitute a large portion of Roanoke's 21st century work force. They will demand quality outdoor recreational alternatives. The Roanoke River is an underutilized asset. I support the Roanoke River Greenway as a hiking and bicycling path extending all the way from Salem to the Indian Rock area in SE Roanoke. Needless to say, if the proposed superhighway parallels our river across from Riverland it will brutalize the senses of anybody attempting to use a greenway on either side of the river.

(7) New residential development near and within downtown is highly desirable. The new apartments in the old N&W office building, along with numerous other apartments that will appear in warehouses and older office buildings, will add hundreds more people calling downtown home. This is one key to Manhattan's continued success.

(8) Urban mass transit which is frequent and reliable has a limited role in Roanoke. The reason few ride buses today is because they can usually get where they are finally going by car faster, and because they have a place to park when they arrive. Mass transit works best when people don't have to wait long, and when they don't have far to walk when they get off the bus or light rail. I know this from personal experience, since I lived in Manhattan for five years, and drove a cab for one of those years.

(9) Roanoke's airport needs more flights with lower fares. Building a faster highway to Greensboro will only intensify the loss of air traffic. Fewer scheduled flights from our valley will cost the city much revenue. Significantly, even though Lynchburg doesn't care for an interstate they are crying out for enhanced use of their airport.

(10) It is an error to think that economic growth must always be horizontal. Again, Manhattan long ago ran out of horizontal space for growth, and yet it still grows. Part of that growth is qualitative, and part is simply vertical. Senator John Edwards has made this point many times. We don't need to bulldoze our way into the future. We can preserve our historic past while we build our cybernetic future.

(11) Inner city neighborhoods should be areas of opportunity, not areas of shame. Just as American prosperity soared after discrimination against women and minorities waned, so too our valley's prosperity will soar in direct proportion to how well we deal with such problems as drug dealers, teen pregnancy, poor senior health, and other core city concerns. By the way, such problems are universal, even in suburbs. It's just that the core city gets most of the bad press. By leading the way within the core city Roanoke will show the way for all communities in our metropolitan region.

(12) The Roanoke Valley, the New River Valley, and Franklin-Henry Counties should cooperate and coordinate in every way possible for cultural and economic improvements, without yielding to the temptation to callously bulldoze family farms and small neighborhoods.

Let's Make Our Region the
Nation's #1 Place to Live

When the Spanish landed in Mexico they witnessed an Aztec culture based on human sacrifices. Hearts of brave warriors captured in battle were ceremonially cut out and offered to the gods for successful harvests. Amazingly, when the Spanish put an end to this barbarism subsequent harvests were the same as before!

We don't need to sacrifice any of Roanoke's neighborhoods to build any new terrain highways. Nothing but evil would come of such a bloody attack on the very heart of what makes Roanoke City and County so special. Yes, a few would benefit; but many would lose.

Response: *The CTB's approved location corridor would follow existing I-581 and Route 220 through the City of Roanoke.*

More people outside the valley would stand to benefit; but even there many farms and other cultural treasures would be destroyed or compromised by new terrain asphalt.

We need to stand fast against the Big Lie from fat cat real estate developers who claim they will be too old to personally benefit from 1-73. The law of economic futures says that once a corridor is selected land nearby immediately becomes much more valuable, even if actual construction is more than a decade away. This means big bucks can be made within the next five years, soon enough to line the silk pockets of these land speculators. Even if it took longer than five years for the Commonwealth Transportation Board to designate a path, which it won't, those greedy speculators have families whom they would love to enrich.

Anybody who doubts these economics should visit one of the Appalachian Power Company millionaires living on the lake. Certain salaried insiders bought farm land on the cheap once they knew where the lake's shores would be. They later sold off part of their land to finance mansions on the lake. It was all very legal, and very dirty.

In today's real estate market sellers won't be as naive as those simple farmers who were snookered by the city slickers. Tomorrow's profits will go to those who are already holding thousands of acres of land near interstate interchanges. These people are among those wailing the loudest for a new terrain highway.

Even though it would be nice to slice off ten minutes on the drive from Roanoke to the lake, who really cares about ten minutes when the purpose of the trip is to spend some vacation time away from home? Ten fewer minutes of fishing won't really matter. Yes, there are people who regularly commute to work over Windy Gap or along Hardy Road-but at least they don't have to contend with sleepy, speeding truckers on their bumper.

There have been many words written about the absurdity of snaking a road along I-77, up I-81, to turn sharply southward and join I-77 in North Carolina. Old Massachusetts Governor Gerry would have loved it! The deal was to give Martinsville some economic relief, but this noble implementation is equivalent to locking the proverbial barn door after the horses have bolted. Those NAFTA jobs have already bolted, making this belated I-73 panacea a bogus solution for a big problem.

There is a better solution for everybody, except for some land speculators: Martinsville needs a better road sooner, not later. Roanoke needs fair protection from the induced demand which would accompany a new terrain interstate slicing through the valley. Fiscal conservatives properly want to get the job done soon at the least cost. Safety concerns must also be addressed. The best solution is not a secret. It is upgrading 220.

First and foremost, upgrading 220 would not invite/induce thousands more interstate truckers from New York and Pennsylvania to blast through our town. At the same time upgrading 220 would address safety concerns and sharply lower the accident rate. Traffic should flow an average of five miles per hour faster, which would provide half the time savings of a parallel new terrain interstate.

Response: *Substantial differences exist between a limited access highway designed to a 70 mph design standard (New Interstate) and a controlled access facility designed to a 60 mph design standard (modest upgrade to U.S. Route 220). Access to a limited access facility would only be allowed at grade separated interchanges and would require frontage roads to access properties on either side of the roadway. Access to a controlled access facility would be limited to major at-grade intersections (either signalized or unsignalized) where possible, but localities would still have the option to request additional access points to the facility, which could degrade the safety and capacity of the facility over time.*

It may be advisable to double-deck 220 from Franklin Road to the Summit Apartments area. It may be necessary to construct a bypass around Boones Mill. It may be necessary to construct some parallel access lanes, as 220 itself will have fewer points of access. These access lanes, done properly, would help to address the school bus safety issue. These lanes could also be designed to help businesses situated along 220. In contrast, a new interstate would forever steal many of their customers.

How much would our small section of I-73 cost? VDOT's estimate at this time is \$1.4 billion. The history of long term public construction contracts shows that lowball estimates are often used to win initial approval, and once the camel's nose is under the tent the final price tag ends up much higher. The over-budget "mix master" project in northern Virginia is only the latest example. A more accurate estimate of the final cost of I-73 by 2020 could be well over \$3 billion. A very conservative estimate would be \$2 billion.

Response: *The accuracy of construction estimates is limited by the lack of final design information, which itself can't be legally developed until the environmental process is completed. This helps to explain why estimates often increase as project development progresses. The estimate is based on more reliable and accurate information.*

Route 220 south of Roanoke could be upgraded for enhanced speed and safety for about one tenth the cost of a new terrain highway! This is what VDOT itself says. These are efficiency numbers any fiscal conservative would applaud. Construction on 220 could start within five years, since political opposition would virtually vanish, helping Henry County workers much sooner. Furthermore, political support from northern Virginia, Richmond, and Tidewater would be found for improving 220, since we would not be

taking more than our fair share. Densely urban areas urgently need many billions of dollars now for their critical highway problems, not for pork-in-the-sky schemes. In an era where cutting taxes, including car taxes, is the surest way for politicians to get elected, count where the most voters live to see who will get seriously funded first.

Response: *The purpose and need identified for the project has multiple components, which the project decision makers must consider.*

Let's not forget the urgent need to rescue blood-stained I-81. Can anybody justify wasting billions on a new terrain I-73 before saving hundreds of lives on the old terrain I-81? The acute challenge of upgrading I-81 will only be aggravated by routing even more traffic from an I-73 along the hilly Christiansburg to Roanoke section of I-81.

Response: *The detailed accident and safety analysis conducted as part of the DEIS focused on the sections of US 220 and proposed I-73 within the study area which stretched from I-81 to the North Carolina state line.*

A detailed comparison of accident rates was conducted in response to the question for I-81 and US 220 for the year 1995. Using DEIS referenced VDOT information for the referenced year, overall accident rates based on the number of accidents and daily traffic volumes are around 70 accidents per million vehicle miles (Acc/MVM) along US 220 and 41 Acc/MVM northbound and 46 Acc/MVM southbound along I-81. This indicates a substantial difference in the overall accident rates, with I-81 being the safer of the two facilities. In addition, the difference in the number of fatal accidents is substantial, with the US 220 highway having a death rate almost 55% greater than I-81. While these are overall values, this would indicate that an interstate type facility, such as I-81, would be safer to travel on as compared to sections of US 220. Notwithstanding, an EIS is being prepared for the entire 325-mile corridor of I-81 in Virginia that is looking at improving safety by separating truck traffic from conventional traffic.

Because the Roanoke Valley is geologically a bowl, air pollution often concentrates here. Currently our air quality has exceeded EPA guidelines for ozone attainment, which sets us up for penalties. A federal non-attainment designation is anathema to many new industries and to high quality knowledge workers considering moving to our valley. It doesn't take a rocket scientist to conclude that the addition of thousands more interstate trucks belching diesel smoke through the middle of our valley would only exacerbate our air pollution.

Response: *As already documented in the draft EIS in Section 3.3, all of the counties and localities in the study area are currently designated by EPA as being in attainment for the 1-hour standard for ozone, nitrogen dioxides, carbon monoxide, and particulate matter (PM10). Monitoring data for the new 8-hour standard has shown that the Roanoke area consisting of the Cities of Roanoke and Salem and the counties of Roanoke and Botetourt exceed this new standard. These exceedances occurred in the absence of I-73. However, instead of designating the area as nonattainment, the EPA has deferred the designation until 2007 because the area has taken proactive steps to identify voluntary measures for cleaning up the region's air quality and developed an Early Action Compact (EAC) with the Virginia Department of Environmental Quality and the EPA. If the area continues to meet the milestones for the EAC program, the region will be reclassified as an attainment area in 2007. Because of the timing of I-73, it will have no effect on the EAC milestones that the area must meet, and it will have no effect on the monitoring data that will be used to demonstrate that the area is in attainment with the 8-hour standard. Finally, the area is in attainment for EPA's new particulate matter standard (PM2.5)*

Roanoke is one of just two cities to have won five All-America City awards. Occasionally the award goes to a region. Our best opportunity for winning a sixth award is for the good people from Roanoke to Martinsville to come together in one mind to encourage progress without destruction. Short of that enlightened harmony, and within the short time frame for I-73 decision making, Roanoke City Council

should exercise all of its powers to protect our beloved valley from greedy land speculators in Franklin and Bedford counties.

Appendix
A Look at the report,
"Economic Impact of I-73
Alignments on the City of Roanoke"

In January 2000 the city was presented with a report prepared by the Economic Development Research Group, Boston, MA. This report cost the city \$29,500. Was it money well spent? Yes and no.

To their credit, the authors of this report pointed out how the city and valley could be harmed by certain options that VDOT may choose. Even with corridors where the report had more good than bad to say, it is commendable that the report did attempt to point out there is no ideal choice. Progress, as they define it, is a win-lose phenomenon.

I am amused that the City of Roanoke paid so much for what is actually a thrown-together, boiler-plate document strewn with statistics and projections of dubious nature. By way of contrast, I had a central role in securing over one million dollars for TAP and VWP in the late 1970s, all at a very modest salary. Later I helped a growing private business win \$2.6 million dollars from the EPA in national competition. I charged them \$1,000 for my grantsmanship services. I believe the true value of this I-73 report is not \$29,500, but something like \$2,950 of the taxpayers' money. Now for some details:

The "No Build" Scenario

Perhaps the greatest weakness of this report was the abject failure of its authors to understand what could be done under a so-called "no build" scenario. Instead of their all or-nothing approach, more enlightened thinkers have considered the benefits of modifying and upgrading the current traffic corridor, at one tenth the cost of a new terrain highway. In this way progress can be a win-win phenomenon.

Response: *From a NEPA perspective, the no-build alternative is the implementation of all transportation improvements programmed in a MPO's long range transportation plan and State highway Agency's statewide plan for construction in the study area over the next 20+ years, with the exception of the improvement being analyzed. This approach allows one to establish a bench-mark and isolate the impacts associated with the improvements being proposed. The alternative you reference is the TSM alternative.*

Associated with their complete disdain for a less-sexy option are dubious statistics. For example, the report stated that travel times to North Carolina would be nearly 60 minutes longer than would occur under any of the I-73 alternatives." This is an absurdity, as trucks already travel 65 mph on many stretches of 220. (I have driven 220 to and from Martinsville a hundred times in the past year.) If the Boston group had projected something like ten or twenty minutes saved they might have been able to defend their position. But ten or twenty minutes saved is not dramatic. We must remember that in order to pick the public's pocket for two billion dollars a non-problem must be cast as a dramatic crisis. Thus the exaggerated time claims.

The report also indicates that a no-build scenario would further constrain the area's ability to continue growing as a major regional distribution center." This projection is at best a semi-truth. If all we are looking at is a future Roanoke Valley filled with truck terminals in the mode of Memphis, then that may be so. If we have another vision of 21st century Roanoke, then this claim is in error.

The report said a no-build scenario "would also forgo additional tourism and visitor-related activity that could be achieved by attracting 1-73 pass-through traffic." This claim is so ludicrous and bogus that it hardly deserves rebuttal. A stronger argument could be made that for every new pass-through tourist several others would be repelled by what that road would do to devastate our beautiful valley.

Why Were the Report Authors So Wrong?

It is hard for somebody from Boston to truly understand our Roanoke Valley. I lived in Boston when I was a graduate student in nearby Cambridge. The culture and political economy of Boston is vastly different from Roanoke's. Therefore, it is easy to understand how these cut-and-paste authors could miss the essence of what it means to be a Roanoker.

This group recently conducted a study on Appalachian development, pointing out how infrastructure improvements led to increased economic development. Was that study's methodology how they secured the Roanoke contract? I know Appalachia well, having spent much time in remote communities of Virginia and West Virginia. The truth is, deepest Appalachia's situation is as different from Roanoke's, as Roanoke's situation is from Boston's.

Anyone who has followed pork barrel projects knows about the "Big Dig" in Boston. I don't accuse these consultants of having anything to do with creating that transportation money pit. Still, it is important to note that thousands of working Bostonians are living off construction cost overruns amounting to billions of dollars. Bostonians don't complain, and the red ink keeps flowing in from taxpayers all over America. In this light, it is easy to see how when a new terrain interstate is planned there are visions of free money at the end of the rainbow. Visions of two billion dollars in VDOT construction contracts are enough to turn many a town from reason to ruin.

The "Big Dig" is also supported because it does not impact any historic districts of Boston. It is seen by many in Bean Town as a win-win scenario, as long as the federal government pays for almost everything. Boston's historic residential districts are culturally sacred. In contrast, our culturally arrogant consultants hardly seemed to care about Roanoke's own historic neighborhoods. Maybe their report would have been better if it had included grassroots neighborhood and environmental input.

A Vision For Our Future

Finally and critically, this report lacks a compelling vision of the future. It only looks backward. It assumes that the essential nature of our valley's economy will be the same in the 21st century as it was in the 20th century. That's about as absurd as saying Roanoke's economy in 1980 was the same as it was in 1880.

Roanoke's Two Futures

As Roanoke embraces the biomedical industry, with its low need for enhanced truck facilities, any new terrain road could become a net minus for the valley's emerging economy, not a plus. The Carilion Biomedical Institute, and associated scientific and educational industries that will follow in the next decades, will erase the need for new terrain roads that would steal as much as one square mile of our precious valley.

Riverside Centre for Research & Technology has the catalytic potential to do for 21st century Roanoke what the railroad did for us a century ago. The Roanoke Valley, with its academic partners in Blacksburg and Charlottesville, is superbly positioned to seize a leadership role in the emerging biotechnology industry. We could see as many as 10,000 new high-wage jobs created across our valley by Carilion and other firms over the next half century. These new jobs will utilize intellectual capital, not diesel capital. Many of the hired knowledge workers will be home grown; but many more with advanced skills will need to be recruited to come live in our valley. Let us ensure that our valley continues to be a magnetic place of special beauty and civic harmony, attractive both to tourists and to advanced knowledge workers.

The August 21-28, 2000 special double issue of Business Week is devoted to the 21st century corporation. Two quotes therein are relevant to this position paper:

"The turn of the millennium is a turn from hamburgers to software. Software is an idea; hamburger is a cow. There will still be hamburger makers in the 21st century, of course, but the power, prestige, and money will flow to the companies with indispensable intellectual property." (pg. 78)

"In the industrial past, there were natural limits to the power of a strategically placed corporation. A corporation was restricted in how many businesses, or customers, or suppliers it could draw into its sphere of influence because there were natural limits on how many could be granted access to its crucial asset-say, a railroad terminal. But in the Creative Economy, the power to exert influence is nearly unlimited because there's no ceiling on how many people can be made to depend on idea-based assets." (pg. 82)

Roanoke's economy and population doesn't need to grow larger; it needs to grow smarter. The biomedical industry is an ideal model for 21st century moat building. Patented ideas and products cannot be turned into generic commodities and farmed out to cheap labor in Mexico or China.

We are gifted with unique intellectual and geographic resources, and with adequate investment capital-all of which can make the Roanoke Valley a world leader in biomedical research and manufacturing. In this first year of the new millennium we are already moving forward toward a wonderful future. Let us not spoil this fruitful trend by turning backward to rusty economic and transportation models that were appropriate fifty years ago.

Response: *Your comments regarding the report prepared by the City of Roanoke are noted. Since the report was only referenced in the draft EIS and was not used to influence the decisions of the CTB, VDOT, or FHWA nor was the report prepared to comply with NEPA, no further response is necessary.*

