The Critical Issue of East-West Connectors

The Transportation Policy Report II Task Force spent significant energy exploring various east-west connectors – that is, facilities that would better connect the I-270 and Georgia Avenue/I-95 corridors north of the Beltway. This issue, perhaps more than any other, divided the Task Force. The following narrative provides background and a discussion of the options.

Background

The notion of an east-west cross-county transportation facility dates as far back as the 1950s and appeared in various revisions of state and county plans, initially as a part of an outer beltway, through the 1960s and 1970s, until the Maryland Department of Transportation (MDOT) in 1979 formally began a study of an "intercounty connector" that would link I-270 and I-95. The study resulted in a modification of a route that had been in county plans since the late 1960s and that by 1987 had emerged from the new study as the Intercounty Connector (ICC) Master Plan alignment. As MDOT proceeded with the preparation of a final Draft Environmental Impact Statement (DEIS), however, federal environmental agencies expressed concerns about the effects of the highway on the Paint Branch watershed and Rock Creek Park and proposed several alternative alignments, so that in late 1991, yet another DEIS commenced that compared the benefits, costs and impacts of the master plan alignment with several alternatives to the north, as well as several stand-alone transit options, an upgrade existing roads option, and a no-build option.

By the summer of 1997, the Environmental Protection Agency had indicated that there were significant environmental impacts along the Master Plan alignment, particularly through the Paint Branch, in their preliminary comments to the Draft Environmental Impact Statement. In the fall of 1997, the Montgomery County Council voted against studying further the alternative northern alignments because of their inconsistency with county master plans and the General Plan and their potential threat to the Patuxent watershed. Instead, the Council proposed a network of east-west improvements that included road widenings and intersection improvements, which remains the Council majority's policy today. In 1998, Governor Parris Glendening formed a panel known as the Transportation Solutions Group that in July 1999 recommended building a limited-access, four-lane, east-west facility without stipulating a specific route. In September 1999, Glendening announced he was canceling the ICC, notwithstanding the recommendation of the Transportation Solutions Group.

With the County Council reiterating in September 1999 that it "opposes a limited access highway in a northern alignment because it is not consistent with adopted master plans and would have adverse community and environmental impacts," and the Governor and the State Highway Administration averse to pursuing the Master Plan alignment, Glendening announced his support for limited-access "corridor improvements" along the

eastern and western ends of the ICC master plan alignment and moved to begin disposing of the center portion of the ICC Master Plan right-of-way (65 percent of the ICC alignment has already been acquired by state and local agencies). The Maryland Board of Public Works voted 2-1 to reject any attempt to sell off the right-of-way, and when five members of the Montgomery County Council moved to dispose of the county-owned portion of the right-of-way, the state legislature intervened and that effort was abandoned. With continuing concern over both the environmental impacts and mounting traffic congestion in the east-west corridor, the issue has reached a stalemate in which deep divisions within the government and among the citizenry have prevented any new consensus.

In a draft of an earlier Transportation Policy Report (known as TPR I), Planning staff recommended linking a western piece of the ICC to MD 28-198. The County Council asked the Planning Department to examine other options west of Georgia Avenue besides a "Western Parkway," including widening Muncaster Mill Road and a Midcounty Highway (M-83) connection to Muncaster Mill Road as master planned or to MD 28. The current TPR Task Force studied linking the western part of the ICC to a local arterial in Round 2 of our traffic modeling, in addition to the Muncaster Mill Road and ICC options, but found the advantage in countywide net speed impact over the Muncaster Mill option to be negligible. In Round 3, the Western Parkway option was not included in the testing after Task Force members questioned its compatibility and effect on the residential wedge east of Georgia Avenue. Instead, Task Force members settled on the following two options, which represent sharply different philosophies and priorities and reflect the divergent makeup of the group.

The Options

A majority of the Task Force members favor pursuing a full ICC on the Master Plan alignment. The majority voted to recommend completing the DEIS that was suspended in 1999 before it reached the final EIS phase and, if necessary, overcoming the federal rejection of the middle piece of the Master Plan alignment with enhanced mitigation and improved design of the facility. The Task Force majority maintained that traffic modeling indicated the ICC had more impact in improving travel speeds, reducing v/c ratios, and improving accessibility and mobility countywide and particularly between the I-270 and I-95 corridors of any other project or set of policy changes the Task Force studied.

Other Task Force members, pointing to the legal and environmental obstacles presented by the ICC and challenging the facility's anticipated traffic benefits, favor a more constrained set of intersection improvements and arterial links that would connect a widened Muncaster Mill Road to a widened MD 28-198. In this alternative, west of Georgia Avenue, the widening of Muncaster Mill was favored over the Mid-County Highway or a stand-alone limited-access Western Parkway because it would avoid the important environmental area between Muncaster Mill Road and Georgia Avenue and would be more compatible with the MD 28-198 roadway.

We will discuss each of these perspectives in turn.

Arguments in Favor of the ICC

Task Force members who supported the ICC cite several arguments for their position:

- Congestion on Montgomery County roads is severe and getting worse, with no relief in sight. Planning staff has indicated that severe traffic congestion on the Capital Beltway will extend to nearly all hours of the day, with a 14-hour daily rush hour projected by 2020 (up from five hours per day in 1997). While the ICC is primarily designed to relieve local congestion on existing arterial highways north of the Beltway, and that is where most of its benefits are seen, traffic modeling confirmed that the ICC also is the only major project the Task Force studied, apart from widening the Beltway, that had any measurable impact on Beltway congestion.¹ No projects in the current Montgomery County's Constrained Long-Range Plan have any measurable impact on Beltway congestion, and the 1997 DEIS flatly rejected all of the numerous "stand-alone" transit alternatives in this corridor.
- ICC supporters feel there is no practical alternative to a limited access connector, as called for in the county's master plans, to support the land-use decisions of the last 30 years and the development that has already occurred in the region's two primary planned development corridors. Linking these corridors was always necessary and remains so today, in addition to meeting the challenges of future population and job growth and the demands it will place on our transportation network by 2025 and 2050.
- The ICC on the Master Plan alignment is the single most effective project for relieving traffic congestion on the roads and for reducing average commuting times. Although the ICC's primary purpose would not be to relieve traffic on the Beltway, the 1997 DEIS indicates it would divert up to 15,000 cars per day off Montgomery County's most heavily used and most heavily congested facility, I-495. Comparison of the DEIS results with more recent Maryland Department of Transportation Beltway studies indicates that the ICC would perform that function *37 times better* than an Inner Purple line that would parallel the Beltway. Moreover, the Outer Purple Line, which the Task Force rejected, performed twice as well as the Inner Purple Line, in terms of Beltway relief (400 cars per day as opposed to a reduction of 200 cars per day with the inner Purple Line), which still leaves the ICC achieving 18 times more Beltway relief.

Round 2 of the modeling completed for TPR II showed that the ICC would increase the average speed *throughout the county* by almost seven percent. While this may not seem dramatic, a seven percent increase in the average speed of all

¹ According to the 1997 DEIS, the ICC would divert up to 15,000 cars per day off the Beltway and nearly 80,000 per day off existing arterial and secondary roads.

750,000 peak-hour trips throughout the entire county, just from the addition of one new road link, is an enormous impact. In particular, the ICC performs *five times better* than widening Muncaster Mill Road and produced more improvements to average travel speeds than any other facility the Task Force studied.

- The ICC has been on the county's transportation and master plans for more than 30 years, is identified in our General Plan, and is both consistent with and necessary to support the county's longstanding "wedges and corridors" land-use concept. In fact, the ICC was part of the network of circumferential highways designed to link the region's planned development corridors in a coherent network. Traffic modeling in this study revealed the soundness of the county's "wedges and corridors" land-use planning when supported by *both* the now-completed 103-mile Metro system (planned at the same time) *and* key roadway links such as the ICC that also were designed to support the development that was planned and built in those corridors.
- The ICC is the most effective transportation project at relieving congestion on the local roads in its vicinity. Perhaps the most impressive and significant data regarding the performance of the ICC is its effect on residential roads in the eastern part of the county. Traffic on many congested local roads would decrease by at least 4,000 cars per day, with as much as a 50 percent improvement in congestion in some cases, according to the 1997 DEIS. This level of impact was seen on each of the following roads:
 - □ Muncaster Mill Road from Norbeck to Redland
 - □ MD 28-198 from Bel Pre to the county line
 - □ Briggs Chaney Road from MD 650 to U.S. 29
 - The Capital Beltway from the Prince George's county line to the eastern I-270 spur
 - □ All of the eastern I-270 spur
 - □ I-270 from the Beltway to I-370
 - Segments of Viers Mill Road above and below Randolph as well as through Rockville
 - □ Rockville Pike from Randolph Rd. to Shady Grove Rd
 - □ Most of Randolph Road from Layhill to U.S. 29
 - □ All of Fairland Road
 - Departies Portions of Georgia Avenue, U.S. 29, MD 108 and others

By comparison, traffic on only five very short north-south roadways would *increase* by at least 4,000 cars per day, and these were confined to those segments near intersections with the ICC that could be accommodated with a limited number of discreet intersection and road widening improvements in those specific segments.

- No other project, including public transportation networks or facilities, comes close to the ICC at relieving congestion on the county's roads and freeways. Even a combination of the Purple Line, the Corridor Cities Transitway, a new light rail spur serving White Oak, and a North Bethesda Transitway, *combined*, only improved the average countywide travel speeds by 1.85% in our traffic models, compared to seven percent for the ICC.
- The county has a great need to interconnect the growing I-270 and I-95 corridors and the ICC is the only effective way to meet that need based upon the modeling results and the results of previous studies. In the absence of the ICC, BWI Airport has produced a brochure illustrating six "back road" routes through Montgomery County neighborhoods to the airport so airport users can avoid the Beltway.
- The ICC is the only project with the capability to meet the demand to interconnect the western part of the county with the state's only major airport, the greater Baltimore region, Prince George's County, and other principal regions of the state.
- Construction of the ICC with modern mitigation techniques such as end-on construction, limited tunneling, and advanced storm drainage filtration and collection would minimize the adverse impacts on the natural environment.
- Alternative East-West routes would cause significant environmental damage, disrupt established communities, carry substantial costs, but be less effective than the ICC in meeting east-west transportation demands. All the proposed alternatives are to the north of the Master Plan alignment, farther from the county's population and business centers and less consistent with the county's commitment to Smart Growth and the protection of the Patuxent watershed.
- Establishing toll or High Occupancy Toll (HOT) lanes would create a source of revenue to fund a substantial share of the ICC construction and maintenance costs.
- The ICC would provide a capacity for express bus service between the ends of the ICC and neighboring communities; and the ICC right-of-way is a potential location for a future east-west transit line.
- Many of the Task Force's attempts to agree on a network of facilities focused on the absence of any adequate alternative east-west connectivity other than the ICC. Twenty-one Task Force members supported a final package of recommended facilities that included the ICC (Task Force protocols required 22 votes on any final package). No other package that did not include an ICC received more than 16 votes.

- Alternatives proposed or favored by Task Force members opposing the ICC • do not address the goals of congestion relief, access to airports, or access to other principal regions and activities of the state, or the needs of the vast majority of county residents who need to use their automobiles for some or all of their daily trips. The Task Force majority felt it was important to stress that 75 percent of the daily trips in the Washington region are not to and from work, and the vast majority of these trips (i.e., shopping, through trips, shipping and deliveries, multiple-destination trips, etc.) are not likely to utilize mass transit even if it were available. Moreover, previous state and federal studies have rejected transit alternatives to the ICC. Similarly, land-use-only approaches also were discredited by the modeling results, which showed only a two percent reduction in travel demand over 50 years from even the most aggressive "alternative land use" scenario tested. Finally, local road and intersection improvements brought only limited short-term relief and resulted in higher traffic volumes on existing local roads, rather than lower volumes produced with an ICC.
- The ICC had significant positive impacts on local intersections, according to the 1997 DEIS.² The performance of intersections is measured by Critical Lane

Interstate 95 and Interstate 270 are the two most intensive business, employment, and transportation corridors in the State of Maryland.... The I-270 Corridor is one of the premier centers of high technology in the U.S., extending approximately 18 miles from the Capital Beltway (I-495) through Clarksburg in northern Montgomery County and into Frederick County. The I-270 facility serves business and residential centers in the 'Technology Corridor,' such as Rockville Gaithersburg, Germantown and Clarksburg. Today, I-270 accommodates more than 175,000 vehicles per day (March 1997).

I-95 is the premier travel corridor in Maryland, connecting the eastern states and metropolitan areas and providing access to air, water, and rail terminals. As an example, I-95 provides access to the Baltimore-Washington International Airport (BWI), the fastest growing international airport in the region. Efficient access to BWI is an important component of Maryland's and the counties' need for an east-west transportation link. Maryland's principal airport, BWI handled 116,000 tons of cargo and served 13,163,000 passengers in 1995. The importance of air travel to business and to individual employment opportunity is evidenced by the fact that 62 percent of the regional (BWI, Dulles, National Airports) air travel in 1987 was related to business. The goals of the federal Intermodal Surface Transportation Efficiency act (ISTEA) of 1991 emphasize access to ports, airports, and intermodal transportation facilities. MDOT and MWCOG seek to maintain and improve all modes of ground access to BWI, and a major component of achieving these goals is improved access between Montgomery County and BWI.²

Currently, the Capital Beltway is the only access-controlled highway linking the I-95 and I-270 corridors. Motorists wanting to travel from the I-270 Corridor to I-95 must first travel south anywhere from six to ten miles to I-495, then endure the congestion on the Capital Beltway all the way to I-95. I-495 operates at capacity during peak traffic periods and the degree of congestion on these facilities is expected to worsen by 2020. To avoid the already severe traffic congestion, motorists traveling between the I-95 and I-270 Corridors often use intermediate arterials and

² The 1997 DEIS evaluated four road alternatives, three independent transit alternatives and a TSM/TDM (Traffic Supply Management/Traffic Demand Management) alternative, and measured each against the county's Constrained Long Range Plan (CLRP). The DEIS refers to the CLRP as the "No-Build" option. The following statement is taken almost verbatim from DEIS (Draft Environmental Impact Statement, Vol. 1, Pages I-4 to I-8, March 1997 ("DEIS")):

Volumes (CLV). Table VI-9 of the DEIS³ shows the PM Peak hour performance at 63 intersections,⁴ comparing the four roadway alternatives against the "no build" option. Of the 63 intersection measurements, the ICC Master Plan alignment improved congestion in 51 instances.

The ICC on the Master Plan alignment improves 30 of the 35 intersections so measured at the P.M. peak:

- □ 14 intersections reduce the number of cars by more than 300
- □ 16 intersections reduce the number of cars by more than 150

Only five intersections showed an increase of more than 150 cars, and the ICC on the Master Plan alignment is the *only* alternative that does not increase any intersection congestion by 300 or more vehicles.

collectors, which were neither designed nor intended to accommodate long-distance travel or the current volumes of traffic that clog residential neighborhoods. Even with the planned improvements on several of these roads, they will not be capable of carrying the projected 2020 traffic volumes. Moreover, this mix of functions, especially of local access and through traffic, creates community concerns.

For example, one of the most prominent east-west routes, Montrose Road/Randolph Road/Cherry Hill Road/Powder Mill Road, crosses 88 intersections and 489 driveways over its 10.4-mile length. These intermediate east-west roadways and intersections on these roadways also operate at or near capacity.

Consequently, the existing network is unable to handle effectively either the existing or projected travel volumes between the I-270 and I-95 Corridors. The absence of an adequate link between the I-270 and I-95 corridors threatens the region's livability, safety, and environmental quality. It also severely impedes sensible economic growth within both corridors.

Even assuming completion of all the transportation improvements (other than a major east-west transportation link) included in the [Metropolitan Washington Council of Government]'s CLRP, the number of intersections and roadway links in the area which operate at or near capacity is expected to increase substantially by the year 2020. Traffic congestion will continue, and indeed become worse, on the one available access-controlled highway – the Capital Beltway – and on the intermediate arterials and community streets which were intended to accommodate mostly local traffic.

In sum, because of projected residential and commercial development, much of which has already been approved, the number of east-west trips is likely to increase substantially by the year 2020. The existing transportation infrastructure does not have adequate capacity to accommodate this predicted increase, because the one existing east-west controlled-access facility (I-495) is heavily congested and is located at the southern extremity of the Study Area, and because the existing network of intermediate arterials and community streets also are heavily congested and are designed primarily to accommodate local rather than cross-county traffic.

³ Vol. 3, Section VI, pages 22, 23; see also the maps at Figure VI-8

⁴ Actually, there are fewer than 63 different intersections, since some of the measures are taken for different lanes at the same intersection.

- The 1997 DEIS, as a far more detailed project study than the TPR's much broader planning study was able to replicate, contains several important findings relating to the ICC on specific arguments made by both sides of the issue, including:
 - "Existing conditions are presented as a reference point. The discussion of alternative effects, however, is always made by comparing each of the build alternatives to the no-build." (DEIS, page VI-3)
 - "The Master Plan alignment (MPA) ... provides major enhancements to accessibility, mobility and connectivity." (DEIS, page VI-5)
 - "The ICC also reduces congestion almost uniformly throughout the study area, reducing the critical lane volume (CLV) at several intersections compared to the no-build alternative." (DEIS, page VI-5)
 - "Travel time [with the MPA] between activity centers in the I-95 and I-270 corridors is reduced by 40 percent to 50 percent, both via transit and via auto or truck." (DEIS, page VI-5)
 - "The MPA and NA [Northern Alternative] provide the greatest increase in access to employment, as measured by travel time." (DEIS, page VI-7)
 - "None of the alternatives [including the transit alternatives studied] greatly affects transit mode share for work trips." (DEIS, page VI-7)
 - "The travel demand forecasts indicated that this alternative [MPA] would improve congestion substantially at 28 of the 54 studied intersections, in comparison to the no-build alternative. It would also attract between 50,000 and 78,000 vehicles per day off existing local roads in the Study Area." (DEIS Major Investment Study Overview, page 13).
 - "None of the transit alternatives would produce a substantial reduction in highway person trips…" [and] "did little to address the need for improved east-west transportation in the Study Area. The Master Plan Transit Alternative and Randolph Road Transitway failed to meet the minimum applicable threshold for a viable rail transit facility. The White Oak Transitway marginally met the minimum applicable threshold…" (DEIS Major Investment Study Overview, page 15).
 - "None of the stand alone transit alternatives provided significant relief to the traffic congestion in the Study Area." (DEIS, Major Investment Study Overview, page 15).

- "The MPA and NA reduce travel time by as much as 40% 50%. They also have the greatest average travel time reduction, which is in the range of 23%-24%." (DEIS Major Investment Study Overview, page 38).
- The percentage of congested lane miles, accessibility to jobs and housing, average travel speeds, v/c ratios on the existing arterial road network, and various origin-destination pairs all improved significantly with the ICC in the Round 2 facilities tests, and in the scenario tests when comparing scenarios that included the ICC with those that did not. The improvements were most noticeable in some cases in 2025, with fewer impacts shown in 2050 due to the fact that demand had increased without proportional capacity improvements in that period, so conditions in every scenario declined as a result from 2025 to 2050. However, it was the scenarios that included the ICC, both in our Round 1 scenarios, and in our final Round 3 scenarios, which came the closest to maintaining current travel conditions.
- It is also important to note that the Planning Board traffic model only looks at traffic data during a one-hour peak period. With many of our major facilities already exceeding their design capacity during that peak hour, this model does not allow us to draw any conclusions regarding what happens in the real world when demand exceeds available capacity to this degree. Many trips shift beyond the peak hour (those that respond by taking alternative local roads when major facilities fill up are captured in this model, but only until that available capacity is filled, then the model simply assumes shorter trip lengths will result because people cannot make their existing commute in a reasonable time). As a result, major changes the ICC and other capacity improvements may be having may not show up very much in the one peak hour, but may be much more noticeable on the "shoulders" of the peak hour, hence the need for further analysis on what the length of "rush hour" conditions is likely to be with or without the ICC. This was supposed to be included in our study data but is not yet complete.

[Source: MINC	PPC Tramic Model	Output, Round	1 Scenario	lestsj			
Key: Scenario 2 =	= "2025 Base Case"; S	cenario 3 = "Roac	l Emphasis"; Sc	enario 4 = "Tran	sit Emphasis"		
ORIGIN/DESTINATION			2025				
			Scenario 3 (Roads)	Scenario 4 (transit)	% Change in Travel Time Between Scenario 3 (ICC) and Scenario 4 (no ICC)	Minutes Saved, Each Way in PM peak-hour, under Scenario 3 (ICC)	
<u>From</u>	To						
White Oak	Gaithersburg	42.9	38.2	46.2	17.32%	8	
White Oak	Frederick	93	85.4	106.5	19.81%	21.1	
White Oak	Shady Grove	35.3	30	37	18.92%	7	
White Oak	BWI	49.7	48.5	53.2	8.83%	4.7	
Gaithersburg	Silver Spring	37.2	34.3	40.2	14.68%	5.9	
Gaithersburg	White Oak	40.2	35.2	45.8	23.14%	10.6	
Gaithersburg	New Carrollton	58.4	52.2	61.1	14.57%	8.9	
Gaithersburg	BWI	74.6	69.8	82.6	15.50%	12.8	
Shady Grove	Silver Spring	32.7	31	35.9	13.65%	4.9	
Shady Grove	White Oak	36.2	29.2	40.4	27.72%	11.2	
Shady Grove	New Carrollton	54.3	46.3	57.2	19.06%	10.9	
Shady Grove	BWI	70.6	63.9	77.7	17.76%	13.8	

Note: These tables only reflect the time savings that would occur, each way, on trips during the PM-peak-hour. More detailed studies, including the 1997 DEIS on the ICC, using average daily traffic models, found much greater differences, including a countywide average travel time savings of 24% and Gaithersburg to Laurel time savings of 40%-50%.

TPR TASK FORCE: IMPACT OF ICC ON	ROUND 2 PM PEAI	2 FACILITIE K-HOUR TR	s mode Avel sf	LING RE PEEDS	SULTS		
[Source: MNCPPC	Traffic Mod	lel Output, F	ound 2 F	acilities 1	[ests]		
ICC Impact on Cou	ntywide T	ravel Spee	ds:				
Ave. Speed (with I	CC)						
Increase of +6.5	i% over ba	se case (no-	ICC) test	, countyv	vide		
ICC Impact on Key	Screenlin	nes in 2050:					
	Average Speed						
	<u>Test 4 E</u>	lase Case	<u>Test 5</u>	5 <u>B (ICC)</u>	<u>% Change</u>		
Rock Creek	11.67	mph	25.01	mph	114.30%	Improveme	ent
New Hampshire Ave	26.09	mph	30.66	mph	17.52%	Improveme	ent
Bottom Line: Signifi impacted directly by	cant impro the ICC.	vements in a	average s	peeds in	both of the m	ajor screer	nlines
Impact of ICC on J	ob and Ho	using Acce	ssibility	(via auto	ı):		
Jobs:	61,000 more jobs would be accessible within 45 min. to County workers (over base case)						
Housing.	49,000 more households would be accessible within 45 min. to employers in the County (over base)						

Round 3 Scenarios Analysis: Key Tra	nsportatio	on MOE Resul	ts			
[Source: TPR II, Round 3 Traffic Modeling	g Results]					
Key Transportation Measures	2025 CLRP (base)	2025 Roads (ICC)	2025 Transit (No ICC)	2050 Master- plan (base)	2050 Roads (ICC)	2050 Transit (No ICC)
		(% change from base)	(% change from base)		(% change from base)	(% change from base)
Average V/C ratios (volume-to-capacity)	0.66	-3.03%	-1.52%	0.68	-1.47%	0.00%
Average speeds (mph)	23.2	12.93%	5.17%	20.9	10.05%	-0.96%
% Congested Lane Miles	13.41	-27.57%	-9.92%	15.76	-1.26%	2.30%

- It is not appropriate to use traffic modeling data to compare average speeds over time, as opponents of the ICC have. Traffic modeling data is appropriate when comparing different options in the same planning year. The reason is obvious: By 2025, the county will have significant population growth, so travel would declines if there is no change in the network. Comparing a base year with a 25- or 50-year time horizon, without adjusting for population, is just as inappropriate as looking at average family incomes over a 50-year period without adjusting for inflation. The result is meaningless and invalid.
- Data from the DEIS does not support the contention that the ICC would not significantly reduce congestion. According to the document: "The MPA would substantially reduce congestion." This appears numerous times in the document.
- The Task Force's Measures of Effectiveness include congested lane miles, which improved under the roads scenario in Round 3 relative to the transit scenario and the base case.

Arguments Against the ICC

Task Force members who opposed the ICC cite several arguments for their position:

- The ICC would produce mixed transportation results at high monetary cost, with enormous adverse environmental impacts and significant adverse community impacts. Proponents of the ICC vastly overstate its benefits while downplaying its cost and adverse impacts.
- According to the DEIS, the cost to build the ICC would be almost \$1.5 billion (adjusted to today's dollars). Environmental mitigation techniques proposed by some members of the Task Force would send the cost even higher.

- The ICC would not reduce average commuting times. The same Round 2 tests⁵ ICC proponents cite for their average speed claims show that *average trip times would increase with the ICC*. The small increase in average speed simply does not improve average commuting times. Further, only a small percentage of commuters would travel the full length of the ICC between I-270 and I-95 or U.S. 1.
- Round 2 tests show that by 2050 average speeds, even with the ICC, will decrease almost 18 percent from the 1998 base.
- The ICC would not significantly reduce congestion. The following bullets address congestion from a number of perspectives. The ICC fails on all counts:
 - Round 2 tests show the ICC would not reduce the overall average Volume/Capacity (V/C) ratio (a major indicator of road congestion) in 2050. If the ICC were built, the V/C is projected at 0.68. If it were not, the V/C would be 0.67.
 - Round 2 tests show that more miles would be driven in congested conditions with the ICC than without it.
 - The ICC would not significantly reduce congestion on the Beltway. With or without the ICC, the DEIS projects that traffic on the Beltway will increase by about 40 percent by 2020. DEIS data indicate that the ICC would reduce the projected traffic on the eight Beltway segments between MD 201 and MD 355 by 0.25 percent to 7.05 percent, depending on the segment. The seven percent reduction cited by ICC proponents is reached on only one segment, and all but two segments show a reduction of less than 3.8 percent. The DEIS explicitly stated that the ICC would not significantly improve the level of service on the Beltway, I-270, or I-495 within the study area (see DEIS pages VI-23 and VI-24).
 - DEIS data show that nearly 90 percent of the intersections that would be failing without the ICC also would be failing with the ICC (see DEIS pages VI-22 and VI-23, Table VI-9).
- On balance, the ICC would increase rather than decrease traffic on local roads. The DEIS shows that building the ICC would increase study area Vehicle Miles Traveled (VMT) on local roads from 7,728,000 to 8,426,000, or nine percent. This would occur because building the ICC on the Master Plan alignment would increase total study area Vehicle Miles Traveled (VMT) from 31.6 million per year to 34.5 million, or 9.1 percent, without changing the percentage of VMT on local roads. As explained in the DEIS (at page VI-31):

⁵ Round 2 tests were the closest we came to isolating the impact of the ICC.

None of the (ICC) alternatives substantially affects the percent of travel on local roads. This characteristic reflects the fact that most ICC users would be traveling to or from a location in the ICC study area, therefore using the ICC for only a portion of their trips and relying on the local roads to complete their trips.

In sum, building the ICC would divert traffic from segments of some local roads and increase it by more on others.

- Round 3 trip tables show small time savings on trips using the ICC compared to trips under the Transit Oriented Scenario. The biggest effect in 2025 or 2050 is a six-minute savings on the 79-80-minute trip from Gaithersburg to BWI. Other time savings are less.
- The ICC would not enhance safety. The safety analysis in the DEIS fails to account for the substantial increase in total VMT and local road VMT the ICC would produce. A more objective analysis probably would show higher fatalities in the ICC study area with the ICC than without it. This would be consistent with Planning staff's Round 3 analysis of countywide fatalities under the Master Plan base case, the Road Oriented Scenario and the Transit Oriented Scenario the TPR considered during this process.
- TPR II did not even model tolls (including HOT lanes) on the ICC, much less determine that tolls could finance it.
- The ICC would increase air pollution, fuel consumption and greenhouse gas emissions. Round 2 tests showed that the ICC would increase countywide vehicle miles traveled (VMT) by 12.4 percent. Reduction in VMT is the Measure of Effectiveness the Task Force adopted for improving air quality and is a reasonable (though not perfect) indicator of reduced fuel consumption and greenhouse gas emissions.
- The ICC would cause enormous permanent environmental damage to forests, streams, wetlands and parkland. The damage would be particularly acute in the western and center sections, where the ICC would devastate stream valley parks along Mill Creek, the north branch and main stem of Rock Creek, Northwest Branch and Paint Branch. These are among the last best places in Montgomery County in terms of natural beauty, quality and diversity of habitat, and abundance and diversity of species. Federal agencies recognized and commented on the major adverse environmental impacts of the ICC on the Master Plan alignment, as well as the special nature of the places affected.

• End-on construction cannot effectively mitigate these impacts.⁶ As the EPA's regional administrator told Council member Gail Ewing in a September 1997 letter:

EPA does not feel this technique would serve as a mitigative measure for the wide variety of long term environmental impacts identified For example, once constructed, the highway corridor would fragment large contiguous forest areas, adversely impact the stream valley parks, generate potentially polluting storm water runoff in the Paint Branch Watershed, and would be an intrusion into the peace and quiet of the many neighborhoods bisected by the alignment. These impacts would be realized regardless of the construction technique employed.

- Primarily because of the serious adverse impacts on parkland, federal regulators have indicated repeatedly that they will not approve the ICC on the Master Plan alignment. Although these are not final agency decisions, approval by the agencies and the courts is speculative at best.
- The ICC should have been removed from the master plan long ago. The ICC's environmental problems have been clear since at least 1987, when the first DEIS was released. Nobody should be proud of the fact that the ICC remains on the master plan over 14 years later.
- Montgomery County should drop the ICC, not pursue alternate ICC routes such as the Northern Alignment studied in the DEIS. Alternate ICC routes have substantial community and environmental impacts, face major political opposition, and were not included in the Task Force's modeling or voting. Yet even if the stated purpose of going through still another Draft Environmental Impact Statement were to obtain approval of the Master Plan alignment, the effect would be to keep all the alternate routes alive.
- Continuing to pursue the ICC will waste resources and divert attention from options that better balance competing concerns and have a chance of being implemented relatively soon.
- Widening Muncaster Mill Road to four lanes from Shady Grove Road to MD 28-198 balances cost, transportation and environmental concerns much better than building the ICC. This project produces useful transportation benefits at a fraction of the cost of the ICC (\$66

⁶ End-on construction is a "top-down" technique. Heavy equipment is not placed on the ground; instead, it is placed on top of work platforms mounted on concrete piles. From these platforms, a crane drives piles and pushes the bridge viaducts forward one bay at a time. Once a bay is completed, the crane "crawls" forward onto the next work platform to repeat the cycle Source: http://www.fhwa.dot.gov/environment/wetlands.htm.

million v. \$1.43 billion) and the environmental impact of the ICC. For example, to the extent increasing countywide average speed is considered useful, Muncaster Mill widening is highly cost-effective. It increases countywide average speed by 1.4 percent. The following table, based on the September 8, 2001, Major Facilities Workbook, shows the relative environmental impacts in Montgomery County, as calculated by staff for TPR.⁷ This methodology cannot fully capture the devastating

⁷ The table does not include the impact of widening MD 28-198 to four lanes, which probably will occur regardless of whether the ICC is built and which was included in all TPR II scenarios and modeling.

environmental impacts of the ICC or the special nature of the places affected. The DEIS and agency comments on the DEIS are more compelling and more thoroughly researched.⁸ But the methodology does give a good idea of the relative impacts of the projects.

EPA bases this rating on the potential adverse impacts to Montgomery County's last remaining reproducing brown trout stream, adverse impacts to wetland acreage and function, extensive stream physical habitat and water quality impacts, extensive parkland impacts and adverse impacts to existing neighborhoods and communities....

EPA finds potential adverse impacts to the naturally reproducing brown trout stream in the Paint Branch watershed unacceptable. Paint Branch is a Use III Natural Trout Waters, a Special Native Trout Management Area and in 1995 the Montgomery Council designated the area as a Special Protection Area (SPA). Considerable resources have been committed to this watershed and special land development regulations have been developed. Two subwatersheds of Paint Branch, Gum Springs and Good Hope Branch, provide virtually all the critical spawning area for the trout population...

All of the above [construction sediment, impervious surface increases, stream temperature increases, decreases in base flow and an acceleration of the widening of the stream channel] would adversely alter the spawning stream's physical habitat and water quality. EPA believes that these impacts would likely eliminate the trout resource from the Paint Branch Watershed. Elimination of the trout would remove the existing use of the stream, a violation of EPA's antidegradation policy.

The MPA, with collateral road construction (the Rt. 28/198 connector), would impact the greatest acreage of wetlands of any alternative. The 22 to 23 acres potentially impacted by the MPA and the associated connector represents one of the largest wetland impacts reviewed by EPA in Maryland in recent times. This impact is particularly large for the Piedmont Province, since wetlands are relatively less abundant in this area, as compared to the Coastal Plain. The undisturbed nature of these wetlands nestled in large undisturbed stream valleys parks provides valuable functions to the highly developed study area....

The MPA wetland impacts are also located in sensitive areas such as the Paint Branch and the Anacostia River watersheds, both of which are the subject of intense study and restoration efforts. The MPA impacts more floodplains and associated forested wetlands that any alternative. The functions these forested wetlands provide in flood control, water quality improvement and wildlife habitat are valuable and only rarely found in area as developed as the study area. The wetlands and adjacent parklands and woodlands constitute some of the largest remaining contiguous forest areas in Montgomery County. The wetlands and forests which would be bisected by the MPA are home to 27 species of permanent and winter resident neotropical migratory birds. The Montgomery County Department of Park and Planning estimates that the MPA would fragment over 1080 acres of the migratory and forest interior bird habitat.

Construction of the MPA would impact approximately five and one-half miles of stream habitat. The loss of riparian corridors and physical stream habitat over such a large area represents a significant degradation to the local stream system....

Perhaps one of the most striking impacts of the MPA is the impact on parklands. Between 145 and 158 acres of Section 4(f) parkland would be taken. Nearly one-third of the ROW of the MPA is located in existing or planned parks. The MPA threads its way from park to park with over mile wide crossings in some locations. The impact to the natural ecosystem, forest fragmentation, direct loss of habitat, increased wildlife mortality, and increased air and noise pollution are significant. Hiking trails, equestrian trails, passive recreation and pursuits of solitude would be adversely impacted....

⁸ The following excerpts are from the August 1, 1997, letter from the EPA's Regional Administrator commenting on the DEIS:

EPA believes that the potential adverse impacts associated with the proposed Master Plan Alternative (MPA) from the direct, indirect and cumulative impacts to aquatic and terrestrial resources and the human environment are unacceptable. Consequently we have given the Master Plan Alternative an EU (Environmentally Unacceptable) rating....

	ICC	Muncaster
		Mill
Wetlands	32.5	0.03
Floodplain	53.01	1.41
Stream/Lake	121.67	4.99
Wetlands/Floodplain/Stream/Lake	146.7	5.18
Combined (Eliminating Overlap)		
Parkland	73	3.76
Biodiversity Areas	115.61	2.26
Top Ten Natural Areas	75.58	0.34
Parkland/Biodiversity/Top Ten	152.29	3.82
Combined (Eliminating Overlap)		
Significant Forest	139.7	1.31
Interior Forest	98.84	0
Playing Fields (Number)	1	0
Well Service Area	32.86	0
Buildings Affected by Transportation	21	1
Right of Way (Number)		
Increase in Countywide VMT	+12.4%	+1.1%
(surrogate measure for air pollution)		

Environmental Measures of Effectiveness (Acres Affected)⁹

[G]iven the magnitude of the natural environment and social impacts of the MPA, EPA recommends that the MPA, as described in the DEIS, be dropped from consideration.

⁹ MD 28-198 is widened to four lanes under both options.