

6.0 TRANSPORTATION EFFECTS

6.1 Transit Effects

A. Draft EIS Comments

State Agency Comments

Consider Additional Development Approved by the County

State Comment: My reading of the Travel Demand Forecasting Technical Report provides no insight as to the levels of development assumed along the corridor. Since the Economic and Secondary Development Effects of the additional development are quantified elsewhere in the DEIS and in the supporting technical report, the additional development levels that the County has approved for each of the station sites also need to be considered in the ridership projections. (0387, 0387-L –7)

***Response:** The Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses were included in Chapter 9 of the Draft EIS and the Travel Demand Forecasting Methodology and Results Technical Report (June 2002). Chapter 5 of the Final EIS does discuss the potential effects of increasing densities on the level of development as a result of the two Build Alternatives. In addition, density bonuses were included in the analysis of secondary development effects that is presented in Chapter 9 of the Final EIS. This analysis was included in the Final EIS in order to address comments about the need to quantify the potential effects of increased density on traffic at Metrorail station areas.*

Interim Express Bus Service and Future Rail Service

State Comment: Local governments are to be complimented for the express bus system it has put in place. It is a form of bus rapid transit. It should be increased and enhanced. But future plans should be directed to the rail alternative, using express bus in the interim. (0131, 0163-T –8)

***Response:** The comment reflects the final recommendations of the Project Team and the evaluation of the two Build Alternatives in the Final EIS.*

Clarifications Regarding BRT Stops, Traffic Forecasting Assumptions, HOV Assumptions, Interchanges Included in CLRP, Roadways in TIP/CLRP, Forecast Roadway Volumes, Development Impacts and Mitigation, Impact Analysis Techniques, and Pedestrian Safety

State Comment: Traffic Analysis and Station Access Study - Technical Report (June 2002)

[a]* Pg. 13, item 2.2, BRT Alternative: 2nd paragraph states: "BRT stops would be located at facilities outside the median [of the DAAR]", and "BRT vehicles would provide access to stops by leaving the DAAR or the Greenway". Examples or descriptions of the BRT stops would be very helpful for the reader to better understand the difference between BRT stations and BRT stops.

[b]* Section 3.3, Pg. 22, 2nd full paragraph - The report states that volumes for the various ramps proposed by VDOT to access Route 7 and 123 expressways from the local roads were necessary to complete the balancing process, and that these were obtained from the Tysons Corner Route 7 and Route 123 Transportation Collocation Study (Collocation Study), State Project Number TPD 11671-2-01, dated April 3. It should be noted that the Draft Collocation Study report was conducted within a compressed 3-month schedule. As stated in Chapter VI of the Collocation Study, traffic growth was based on a previous report (June 2002 Route 7/123 Corridor Study) and on several assumptions. It is hoped that any traffic volumes used in the DC RTP study included an understanding of the Collocation Study's context and limitations, and a verification of the assumptions used. We recommend that both the

Traffic Analysis and Station Access Study and the Travel Demand Forecasting Methodology reports include a description of: the assumptions and how they were verified or modified as appropriate; and how the resulting volumes were determined to be consistent with the overall forecasting effort conducted specifically for the DEIS.

[c]* Section 6.3, pg. 134, Table 6-2 - Footnote 1 states that "Direction not specified by VDOT" yet numbers refer to Dulles Toll Road eastbound. Note 2 refers to Route 50, yet Footnote 2 refers to HOV lane on I-495. It appears that the text of the footnotes was changed between the 95% Review Draft and this latest (June 02) report, but the corresponding notes on the table were not revised. Footnote 1 in the 95% Review Draft referred to "Volumes exclude high occupancy vehicle lanes; no direct comparison to year 2000 can be made" (please note that by year 2000 (base year in table), HOV lanes were already in place and, for the DTR, volumes are available by lane.

[d]* Chapters 9 through 17: The proposed interchanges at 7/West Park-Gosnell and 123/International are not identified in the CLRP. Although an interchange at an isolated location does not need to be called-out from an air quality conformity standpoint, a series of interchanges in close proximity to one another could change the functional classification (for modeling) of the road from arterial to freeway (which would have to be accounted for in the model).

[e]* Monroe St/Van Buren in the town of Herndon are not identified for improvement in the adopted FY-01

TIP/CLRP. East Elden St. is identified in the adopted FY-01 TIP/CLRP as reconstructed as a 4-lane section between Monroe St. and the Herndon Parkway East and widened to 6 lanes between the Herndon Parkway East and the Fairfax Co. Parkway. Both widening and reconstruction have a completion date of 2005.

[f]* It is suggested that, when discussing the Planned Roadway Improvements, the CDRTIP DEIS report make specific reference to their source official documents: the Six Year Program, the Transportation Improvement Program (TIP) and the Constrained Long Range Plan (CLRP), and the Fairfax County Comprehensive Plan. Please refrain from using statements about "VDOT's decisions" that are not backed up by the approved Six Year Program. For projects beyond the Six Year Program time horizon, reference should be made to the source document (TIP, CLRP as appropriate), noting that these documents are the result of cooperative efforts of multiple agencies at various levels (federal, state, local) and subject to public review. Please remove all references to VDOT deciding that specific interchange and road widening projects (Route 7 and Route 123) are "high priority" (e.g. section 10.1 on pg. 173, section 11.1 on pg. 187, section 12.1 on pg. 203, section 14.1 on page 233). Prioritization is typically a result of coordinated evaluation with input from Fairfax County, and in accordance with Fairfax County's Comprehensive Plan. Perhaps the consultant is making inferences from preliminary or final VDOT-funded consultant reports such as the 6/00 Transportation Corridor Study by PHR&A, or the 2/5/02 Tysons Corner Selected Improvement Compatibility Study by PTG. It should be noted that although these reports are used by VDOT as tools for analysis/coordination, their recommendations do not necessarily imply VDOT's concurrence.

[g]* Existing traffic volumes appear low. For example the intersection of Route 123 at Tysons Boulevard indicates 90 vehicles during the a.m. peak and 62 vehicles during p.m. peak making left turns from southbound Tysons Boulevard onto eastbound Route 123. A recent traffic study done in the same area indicates that the existing a.m. left turn (same as above) as 392 vehicles and 1845 vehicle during the p.m. peak. All numbers need to be checked properly and appropriate numbers used as a starting base.

[h]* The County has the nondegradation policy in place it is unclear as to how the increased development is planned to be mitigated. Also how is all the planned future higher densities addressed in the study? Are they included in the overall growth rate?

[i]* Pg 19 - Highway impacts are not analyzed in detail, only very generic information is presented in the document. No supporting data/analysis were provided. Statement is made that there are Synchro, HCM, Signal2000 and Transyt-7F files available for review but they were not included in the package. All the files in a electronic format as well as paper copies need to be provided for the Department's thorough review. The report includes summary findings that are very generic in nature. Highway corridor impacts need to be addressed.

[j]* Accident data and analysis are very generic and does not include the details needed. Specific attention needs to be given to address the pedestrian safety concerns. (0421, 0421-A -1)

Response: A point-by-point response to these comments is provided below.

[a]* Site plans for the proposed BRT stations and BRT stops were provided in the proposed General Plans (Draft EIS Volume IV, June 2002).

[b]* The Since there will be no park-and-ride facilities (other than 500 spaces at Tysons West Station) and only two Kiss & Ride facilities at the four Tysons Corner Metrorail stations and since there will be minor changes to the roadway network in Tysons Corner, the analysis in support of the Draft EIS was not reanalyzed based on the fact that project-related impacts would be minimal.

[c]* Comment Noted. However, the Traffic Analysis and Station Access Technical Report (June 2002) has not been reproduced for this subject matter. The footnote would have been clarified to reflect the absence of HOV lanes only on the Beltway in 2000. Effects of the project on the non-HOV portion of the DTR were provided in the table.

[d]* Comment noted. References to the CLRP had been deleted from these chapters of the Draft Technical Report. In the case of Tysons Corner, the Project Team had desired that the network be as consistent as possible with highway improvements included in VDOT's Collocation Study. The basis for the Team's network assumptions were clarified in Chapter 3. If the operational characteristics of a roadway change, as on Route 7, the highway class and speed code in the model were changed accordingly; thus the model did account for this. For the analysis in support of the Final EIS, the proposed interchanges of Route 7 and Route 123 in Tysons Corner as identified by the Fairfax County in its Comprehensive Plan are not part of the future roadway network, since the interchanges are not yet recognized by regional plans.

[e]* The roadway network was modified for the Final EIS to reflect the most recent TIP/CLRP.

[f]* Comment Noted. However, the Traffic Analysis and Station Access Technical Report (June 2002) has not been reproduced in its entirety. The Traffic Analysis Technical Report prepared in support of the Final EIS will include the table of roadway improvements that the Project Team had prepared as input to the travel demand forecast model.

[g]* Since there will be no park-and-ride facilities (other than 500 spaces at Tysons West Station) and only two Kiss & Ride facilities at the four Tysons Corner Metrorail station, and since there will be minor changes to the roadway network in Tysons Corner, the analysis in support of the Draft EIS was not reanalyzed based on the fact that project-related impacts would be minimal.

[h]* Chapter 22 of the Traffic Analysis and Station Access Technical Report (June 2002) discussed the secondary development-related travel effects and related mitigation strategies. The analysis included in this chapter provided a "worst-case" look at the density bonuses approved by Fairfax County. All traffic impacts that would result from the increased densities would be mitigated by Fairfax County.

[i]* Regional highway operations were addressed in Chapter 6 of the Technical Report. The analysis presented the long-term (2025) and opening year effects that the Build Alternatives would have on selected highway links within the corridor. All peak hour data was received from Laura White at VDOT in Richmond. All resulting model output was provided in the Appendix to the report. Traffic analysis output was provided to VDOT.

[j]* Accident analyses were provided for each station area in Chapter 8 through 21 of the Technical Report. The methodology used for this analysis was provided in Section 3.8 of the same report. Due to time constraints, accident models were not developed for this analysis; rather the analysis is based on accident experience trends and professional engineering judgment based on planned roadway improvements on a particular segment. In terms of pedestrian safety, every effort will be made to minimize pedestrian and motorist conflicts through the design of the stations. As part of the project, pedestrian and vehicular access would be provided to each station from the nearest public rights-of-way. All other planned pedestrian and bicycle trails fall under the jurisdiction of the City of Falls Church, Town of Herndon, Fairfax and Loudoun counties and VDOT.

Clarifications Regarding Transit Operations Information

State Comment: Pg. 6.53: Table 6.3-11 - suggest adding "Corridor Transit" to beginning of title. (0421, 0421-A –20)

State Comment: Transit Operations and Maintenance Plan - Technical Report (June 2002)

- § Page 28 - Shows the summary of dead head calculations. The Metro rail Service and inspection yard sites are listed in column 1 but not show in the report. Please include a map showing these potential locations for the Metro rail Service and inspection yard sites.
- § Page 29 - Table 3-8 Some of the columns heading show units and others particularly the distance column does not show any units. Please check all the tables to include the units for columns.
- § Chapters 1 & 2 - Header on most of the pages incorrectly displays Index of Figures in the upper right hand corner on most of the pages.
- § Page 23 - 2nd paragraph second line should read New Carrollton would be replaced instead of New Carrollton would replaced. (0421, 0421-A –3)

Response: *The Transit Operations and Maintenance Plan was updated as part of the Final EIS. Relevant comments were addressed in that document.*

Recommend Establishing An Executive Summary, Screenline Volumes, and LOS With and Without Improvements

State Comment: Travel Demand Forecasting Methodology and Results & Travel Demand Forecasting Methodology and Results Appendix - Technical Report (June 2002)

- § An executive summary as previously suggested, is highly recommended. This summary ought to include information such as transit modal split, LOV and HOV for both with and without Transit (i.e. Tyson or Herndon to DC). It is unclear what are some of the critical assumptions and data sources used.
- § Screen-line volumes for the forecasted years under all alternatives, including no-built should be included.
- § It is very difficult to assess whether Highway LOS for the corridor has been addressed. It would be helpful to include Highway LOS for both with and without transit improvements and increase land use density, in order to evaluate highway impact and related mitigation measures identified. "Dulles Corridor Transit Trip Summary, 2025 Alternative T4, Home Based Work Person Trips" Table (in the Appendix I, no page #, no table #) shows 64.6% transit share from Tyson to DC Core. In this case, please show the impact on the highway LOS. (0421, 0421-A –2)

Response: *Transit mode split, intersection levels of service and highway Levels of Service are presented in Chapter 6 of the Final EIS).*

Regional Agency Comments

High Demand for Metrorail

Regional Comment: Independent market research has shown a high demand for a rail system that offers competitive trip times with the automobile and a convenient service-oriented operation for the customer. (0133, 0133-T –3)

Response: *The analysis presented in Chapter 6 of the Draft EIS and Final EIS shows that the two Build Alternatives offer similar travel times for many of the analyzed origin-destination pairs. In many of these cases, travel times are competitive with those for automobile travel.*

Need Source for Air Passenger Projections

Regional Comment: The source of the IAD passenger projections for air travel presented in DEIS Section 1.2.2.4 needs to be identified. The figures do not agree with MWAA's unconstrained projections

of passenger activity, which have been reviewed and approved by FAA. MWAA projects 37.9 million annual passengers (MAP) for 2010 and a build-out scenario of 65.7 MAP. Note that the term "million annual passengers" includes the sum of enplanements and deplanements, not simply "boardings" as stated in the DEIS. (0440, 0440-A –4)

Response: *Comment noted. MWAA's airport passenger projections have been updated in the Final EIS.*

Public Comments

Concerns About Capacity Constraints of the Metro System

Public Comment: Core capacity of the metro system overall is a serious concern. We are all well aware of Metro's equipment supply and maintenance issues now, and the many trains and stations that currently experience overcrowding at rush hours. Rosslyn has been described in a Post article as a choke point, and Metro Center has difficulty handling the number of commuters it now serves. This calls into question whether the overall system will be available to accommodate the increases in ridership overall as our region continues to experience significant growth. I think it is unrealistic to think of these as connecting and have people simply going between the airport and Tysons. (0150, 0150-T –3)

Public Comment: The overall capacity of the system needs to be realistically evaluated. (0150, 0150-T –11)

Public Comment: Another concern is the looming problem of Metro's core capacity constraints, and the fact that the Orange Line is near or at capacity (in one direction). It is essential that you be forthright about the impact of this project, if it were successful, on the problems of core capacity. The DEIS makes note of the Core Capacity study, but there is no information about the timing or effects that the improvements will have on the Dulles project. If the core capacity changes are not made, in what ways will it impact this project? (0158, 0223-M –5)

Public Comment: Another concern is the looming problem of Metro's core capacity constraints, and the fact that the Orange Line is near or at capacity in one direction. It is essential that you be forthright about the impact of this project, if it were successful, on the problems of core capacity. The DEIS makes note of the core capacity studies, but there is no information about the timing or effects that the improvements will have on the Dulles project. If the core capacity changes are not made, in what ways will it impact this project? (0158, 0158-T –6), (0158, 0475-L –5)

Public Comment: Rail is the Locally Preferred Alternative. I believe everybody who wants to see transportation improvements in the Dulles Corridor supports rail. But I have some questions. How will the Orange Line metro, now approaching capacity, handle increased ridership? (0181, 0181-T –3)

Public Comment: One thing that is of concern to ACT is the core capacity of the existing Metro System in the District of Columbia. The existing tunnel under the Potomac River is already at capacity. How will the additional trains that service to Dulles will need get to and through the District? (0428, 0428-E –2)

Response: *To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by the WMATA Metro Matters program and by the Project.*

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

BRT Could Provide Greater Capacity

Public Comment: BRT could provide greater transit capacity than Metrorail in the Dulles Corridor. There are BRT systems operating today that carry three to four times as many passengers per hour as the proposed Metrorail extension. Metrorail, however, already has significant capacity issues on the Orange Line, particularly where the Orange and Blue Lines converge in Rosslyn. (0444, 0444-E -3)

Response: As outlined in Chapter 2 of the Draft EIS, the operating plan for BRT would have resulted in approximately 80 BRT vehicles serving the eastern end of the corridor in the peak hour in the peak direction. With approximately 61 seats per vehicle (standees should not be allowed on high-speed bus service on busways and HOV lanes), the peak-hour capacity provided by the BRT Alternative would have been 4,880 passengers. The Metrorail operating plan will result in 9 trains traversing the corridor in the peak hour in the peak direction. With 8 cars per train and a loading goal of 120 passengers per car per hour, the Metrorail Extension will provide capacity for 8,640 passengers during the peak hour. Therefore, Metrorail capacity in the Dulles Corridor would be nearly twice that of BRT.

Space considerations at West Falls Church would have limited the ability to increase the number of BRT bus bays at this station to support more than the 80 vehicles per hour in the peak period, as proposed in the Draft EIS. Moreover, at this flow rate, vehicles would have arrived at West Falls Church every 45 seconds, on average. More frequent arrivals would likely have resulted in delays, as buses would have been forced to wait for an open bay until buses in front of them pulled out.

For different applications in other cities, where the same limitations on standees and the volume of buses do not apply, BRT systems can have much higher capacities. In some cases, BRT systems carry the same level of demand as rail systems. As part of analysis for the range of alternatives proposed on the Dulles Plan B website during the Draft EIS, the Project Team evaluated the potential for higher-capacity BRT vehicles to meet the demand projected for Metrorail. The detailed response for Dulles Plan B, confirmed that, even with higher-capacity, BRT vehicles cannot meet the demand that Metrorail satisfies

As described in the analysis, transportation systems must be designed to support the demand expected during the "peak of the peak," even though this may result in under-utilization of capacity for the rest of the peak period. For the two Build Alternatives of the Final EIS, this "peak of the peak" demand requires that the system have enough capacity to support approximately 7,500 passengers in the peak direction, in the peak hour for operations in the corridor.

The analysis in the detailed response demonstrated that if vehicle size would have been increased to 80-foot bi-articulated buses with approximately 80 seats (the largest BRT vehicles currently available), the maximum capacity that could have been provided by the BRT Alternative as then defined would have been 6,400 persons in the peak hour and peak direction (80 buses per hour serve the corridor during the peak period). This capacity is not enough to meet the peak demand for Metrorail.

To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by the WMATA Metro Matters program and by the Extension project. The next paragraph relates the number of cars to train loading.

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

Concerns About Capacity of Orange Line

Public Comment: In addition, the EIS ignores the significant capacity issues already facing the Orange Line. Just last year, WMATA was considering a \$6 billion program to separate the Blue and Orange lines, effectively doubling the capacity of the Orange Line, a project made necessary by significant overcrowding on the Orange Line. The EIS does not address how the capacity issues will be solved if the Orange and Blue lines are not separated. In fact, the EIS states that 30 trains per hour will travel through the Rosslyn/Foggy Bottom tunnel during peak hours, which exceeds the 26 trains per hour considered necessary to maintain acceptable service levels. By contrast, a BRT alternative could be designed that would help avoid overstressing the Orange line. In the EIS, all three BRT alternatives take passengers to the West Falls Church Metro Station, where they must transfer to the Orange line. No consideration is given to taking passengers to other stations, such as Rosslyn, where they could transfer to Metrorail without crowding the Orange line, and without stopping at all of the stations between East Falls Church and DC. (0445, 0445-E -10)

Response: *Metrorail in the Dulles Corridor will actually relieve overcrowding on the outer Orange Line, because Metrorail customers in the Dulles Corridor would access Metrorail at a Dulles Corridor Metrorail station rather than boarding at an outer Orange Line station. BRT ridership estimates, however, showed that many riders from the Dulles Corridor would have gone to an outer Orange Line station to access transit, rather than board BRT in the corridor. The reasons that BRT was not extended eastward beyond West Falls Church in the Draft EIS include the lack of bus terminal capacity at stations east of West Falls Church as well to avoid congestion on I-66, which would degrade BRT performance.*

To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by

the WMATA Metro Matters program and by the Extension project. The next paragraph relates the number of cars to train loading.

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

Need to Clarify Operational Assumptions

Public Comment: The DEIS makes no mention of an "average speed," which factors in stopping times at stations. In Maryland's Corridor Cities Transitway study - also a contest between bus and rail in the I-270 area - and Purple Line major investment study, average speeds are given (for example, 22 mph for light rail and bus in the case of Corridor Cities). But in the case of the Dulles study, it would appear WMATA and VDRPT used an "assumed permitted speed" of 59 mph for rail and 55 mph for bus. They also factored in a 30-second "dwell time" to stop at stations and offload and load passengers. Federal data shows that the average speed of Metro is 25 mph. Dwell times at stations are more like one minute. It is physically impossible for even a four-car Metro train to get up to 59 mph between stations, except perhaps on a long stretch. In contrast, a bus can exceed 55 mph and obtain that speed within 1 to 2 minutes. Speed is essential in determining travel times from point-to-point and travel time is a key factor in determining whether people will use transit. WMATA's table showing a 78-minute trip from Dulles Airport to Union Station is unreal and probably based on these "permitted speeds" and underestimated dwell times. Such a trip is about 45 miles. It would require stopping at more than 20 stations plus a transfer at Metro Center to a Red line train. In contrast, a trip from White Flint to Metro Center (about 20 miles and 10 stops) takes 45 minutes to an hour. Hence, a trip from Dulles Airport to Union Station is more likely to take over 90 minutes by rail, but half that time on BRT. (0112, 0462-L -5)

Response: *Total travel time is the relevant input into the travel demand forecasting model. This data for Metrorail is included in the Transit Operations and Maintenance Plan Technical Report. Since total distance is also available in the tables of the Report, average speed can be easily calculated. The maximum attainable speeds were used as part of the simulation package to determine travel time, but the simulation package also considers the number of stations, distance between stations, the number and radius of curves, station dwell time, and vehicle acceleration rates.*

Based on the data, the average speed of Metrorail in the corridor is approximately 36 miles per hour. The average system wide speed of 25.2 miles per hour reflects the extremely varied nature of the Metrorail system, including suburban stations that are more than a mile apart and downtown stations that are one-quarter mile apart.

Average Speed Assumed for Analysis

Public Comment: A significant factor in determining transit ridership - whether it is BRT, light rail or heavy rail - is average speed. Section 3.1.4, Table 3-5 on page 21 of your technical report, "Transit Operations and Maintenance Plan," mentions "maximum free flow speeds (miles per hour)" for the Dulles extension and BRT. It also notes these are "assumed" speeds. It appears you used these speeds in your modeling, not average speeds, because I saw no "average speeds" any where in the documents. (See Exhibit 2) However, nowhere do you see "average speed" when you calculate boarding times at stations (dwell time). Table 3-5 only provides the maximum design speed (75) and permitted attainable speed

(59.5 mph), and no maximum design speed for buses, but you have a permitted attainable speed of 55. (0112, 0462-L –24)

Public Comment: The DEIS makes no mention of an "average speed," which factors in stopping times at stations. In Maryland's Corridor Cities Transitway study - also a contest between bus and rail in the I-270 area - and Purple Line major investment study, average speeds are given (for example, 22 mph for light rail and bus in the case of Corridor Cities). But in the case of the Dulles study, it would appear WMATA and VDRPT used an "assumed permitted speed" of 59 mph for rail and 55 mph for bus. They also factored in a 30-second "dwell time" to stop at stations and offload and load passengers. Federal data shows that the average speed of Metro is 25 mph. Dwell times at stations are more like one minute. It is physically impossible for even a four-car Metro train to get up to 59 mph between stations, except perhaps on a long stretch. In contrast, a bus can exceed 55 mph and obtain that speed within 1 to 2 minutes. Speed is essential in determining travel times from point-to-point and travel time is a key factor in determining whether people will use transit. WMATA's table showing a 78-minute trip from Dulles Airport to Union Station is unreal and probably based on these "permitted speeds" and underestimated dwell times. Such a trip is about 45 miles. It would require stopping at more than 20 stations plus a transfer at Metro Center to a Red line train. In contrast, a trip from White Flint to Metro Center (about 20 miles and 10 stops) takes 45 minutes to an hour. Hence, a trip from Dulles Airport to Union Station is more likely to take over 90 minutes by rail, but half that time on BRT. (0112, 0462-L –5)

Public Comment: What are the average speeds assumed for rail and bus? In the EIS I believe there is a "top speed" from station to station, 59 mph for bus and rail, or something like that, but what is the average speed for the Dulles Rail and Dulles BRT considering station stops? (0112, 0382-L –3)

Public Comment: Secondly, these speeds are not even in line with the inflated AVERAGE speeds Maryland DOT used for its Purple Line study - 47 mph for heavy rail and about 35 mph for light rail. According to the "Urban Transport Fact Book," prepared from 1997 data from the Federal Transit Administration, Washington's Metrorail system only averages 25.2 miles per hour! (0112, 0462-L –26)

Public Comment: Buses can average 50 miles per hour even with the six stops slated in these proposals. Metrorail would travel no more than 35 mph given the numerous stops in between, and the idea of having as many as six stops just at Tysons Corner is ridiculous. Also, if you wanted to, you could just add express bus service to the Dulles Access Road, build flyover ramps at key locations for on-and-off traffic, and charge single occupancy motorists to use it under the HOT lane/congestion pricing concept. (0112, 0269-M –7)

Public Comment: Bus rapid transit is not only a faster mode, but it's cheaper. This means motorists who want to drive alone could pay -- we could have hot lanes with this to help pay for the cost of that. There's no hot lane proposal here that I can see. Buses can average 50 miles per hour, even with six stops in between. Metro, I would say, would be no more than 30 or 35; at least that's what the Purple Line study showed. (0112, 0245-T –7)

Response: *Total travel time is the relevant input into the travel demand forecasting model. ridership for a given transit alternative will be more dependent on travel times than on average speeds. The Transit Operations and Maintenance Plan (June 2002) prepared in support of the Draft EIS showed that Alignment T6 had a travel time of approximately 41 minutes between the Route 772 and East Falls Church stations. The all-stops operating pattern for BRT 1 had a travel time of approximately 48 minutes between Route 772 and West Falls Church, even though this alignment has fewer stops than Alignment T6.*

Since total distance is also available in this technical report, average speed can be easily calculated. The maximum attainable speeds were used as part of the simulation package to determine travel time, but the simulation package also considers the number of stations, distance between stations, the number and radius of curves, station dwell time, and vehicle acceleration rates. Based on this data, the average speed of Metrorail in the corridor is approximately 36 miles per hour (mph). The average speed of BRT 1 (Route 772 to West Falls Church making all

stops) would have been 31 mph. The average Metrorail system wide speed of 25.2 miles an hour reflects the extremely varied nature of the Metrorail system, including suburban stations that are more than a mile apart and downtown stations that are one quarter mile apart.

As the owner and operator of the Dulles Toll Road (and other major HOV facilities in the region), it would be VDOT's responsibility to fully evaluate and implement any proposals that allow travelers driving alone to use the HOV lanes during peak hours for a fee ("value pricing"). Such value pricing systems would require in-depth study. Issues include the lack of space for barrier-separation, technological challenges associated with a non-barrier-separated system, and equity considerations.

Accessibility and Frequency of Metrorail Service in Corridor

Public Comment: We need to be sure that the rail options through Tysons will be extensive, easy to access, and run frequently at all hours, to encourage people to leave their cars off the roads. (0179, 0179-T -7)

Response: Access provisions for four Metrorail stations in Tysons Corner include pedestrian bridges across major roadways, and Kiss-and-ride facilities at the Tysons West Station and Tysons East Stations. All stations include provisions for feeder bus service or are located near existing bus stops.

The Wiehle Avenue Extension would have the same operating hours as the existing Metrorail system: 5:00 a.m. to 12 p.m. on weekdays (2 a.m. on Friday), 8 a.m. to 3 a.m. on Saturdays, and 8 a.m. to midnight on Sundays.

Service Must be Rapid and Affordable

Public Comment: This new service must not only be affordable for the riders and the taxpaying public, but it also must be rapid, or it may not be used by those of us for whom it is to be built. (0148, 0148-T -2)

Response: The analysis presented in Chapter 6 of the Final EIS shows travel times for a number of origin-destination pairs. In many of these cases, travel times are competitive with those for automobile travel.

Concerns Regarding Speeds and Travel Times Assumed for Analysis

Public Comment: Speed is a significant assumption in modeling any new transportation project and if you assumed these speeds for rail, your ridership projections are highly suspect, but so are your travel times. For example, Table 6.3-4 on Page 6-40 of Part I of the EIS is impressive for what is left out - an estimated rail travel time from Dulles Airport or any of the Loudoun County stations to any rail station in the District of Columbia. Might this omission be due to the unpleasant truth that such trips will take over 90 minutes in each direction if done by rail? (See Exhibit 3) However, this table forecasts a 57-minute estimated Metrorail ride time from Union Station to Reston Town Center and 60-minute ride via express bus. How can a train stop at seven stations between Reston and East Falls Church, and from there, 10 more station stops on the Orange Line, plus a transfer to a Red Line train at Metro Center, and make the trip in 57 minutes, when it took me 45 minutes to one hour to ride the Red Line from White Flint to Metro Station, which only requires stopping at 10 stations? Why weren't travel times between ALL stations computed and provided to the public? It is physically impossible for a Metro train to do this unless you are assuming 59 mph speeds, which means you will likely have many passengers with upset stomachs due to the revving up of high speeds and slowing down from station to station. But your calculation of 30-second "dwell times" also is mischievous. It is preposterous to assume that a Metro train can stop and unload and load passengers in only 30 seconds. More likely, we are talking about a 1 to 2 minute dwell time. (0112, 0462-L -25)

Public Comment: How can a trip from Dulles Airport to Union Station take only 78 minutes (see one of your charts) and pass more than 25 stations in the process, when now it takes me about 45 minutes to an hour to go from White Flint to Union Station, and that is no more than passing 15 stations? (0112, 0382-L-5)

Response: *The travel times for both Metrorail and BRT were developed using a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations. The inputs into the model such as station dwell time reflected WMATA experience from existing operations and WMATA vehicle characteristics. Travel times outside the corridor reflected WMATA schedules that are used in the operation of the system. Scheduled trip time between White Flint and Union Station is 30 minutes. Travel times between all stations in the corridor are shown in the Transit Operations and Maintenance Plan (June 2002). This document was a public document. The 30-second dwell time is the WMATA standard and is based on current operating experience.*

Dwell Time at Stations

Public Comment: Why are you assuming only a 30 second layover at rail stations? Isn't it more like a 1 minute layover, especially during rush hour? (0112, 0382-L-4)

Response: *The 30 second dwell time is the WMATA standard and is based on current operating experience.*

Public Comment: Coordinate mitigation for traffic impacts with the WMATA West Falls Church parking garage project. (0388 6-1)

Response: *For the Final EIS, the Project Team included the new 960-space WMATA park-and-ride structure in the No-Build Alternative for the traffic analysis of this station area.*

Consider Additional Development Approved by the County in Ridership Projections

Public Comment: Since the Economic and Secondary Development Effects of the additional development are quantified elsewhere in the DEIS and in the supporting technical report, the additional development levels that the County has approved for each of the station sites also need to be considered in the ridership projections. (0387, 0387-L-7)

Public Comment: Part of the analysis that was done --it was done by Loudoun County's changes to the comprehensive plan, but it was done for Reston stations and it's buried in one of the technical appendices, but is showed in Reston where we did also revise our comprehensive plan last year to promote transit oriented development with a mix of shops and housing at the stations, that you can substantially increase the number of riders, and it would go from 87,000 to 101,000, and the number of new riders would increase from 38,000 to 54,00. (0141, 0243-T-5)

Response: *The travel demand forecasts in the Final EIS are based on the Metropolitan Washington Council of Governments' Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun County. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. The changes in the Fairfax and Loudoun County Comprehensive plans must be incorporated into the regionally adopted land use forecasts in order to be reflected in the model results and the Final EIS. The Project Team did incorporate density bonuses in the Tysons Corner and Reston/Herndon areas into the analysis of secondary traffic impacts in support of the Draft EIS, but these demand figures were not included in the Final EIS.*

Metrorail Travel Times

Public Comment: Contrary to popular belief, heavy rail is not very fast. With up to 13 stations from Route 772 to West Falls Church, meaning about a two-minute layover for passenger discharge and boardings, this means the entire 24-mile trip from Ashburn to Tysons would consume 26 minutes just sitting at stations. I estimate the entire trip will take about an hour - the same time it takes to ride from White Flint to Metro Center on the Red Line. This means a trip to downtown Washington from Loudoun County would take more than 90 minutes. (0112, 0269-M -5) (0112, 0245-T -5)

Response: *Estimated Metrorail travel time from Route 772 to East Falls Church is approximately 40 minutes for the Full LPA. Estimated Metrorail travel time from Route 772 to Metro Center is approximately 60 minutes. These travel times were developed with a simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations.*

Off-Peak Service Levels and Service Hours

Public Comment: Metrorail trains must run with the most frequent headway possible throughout the day. There is no reason to reduce the frequency of service outside of so-called "rush hours." Working and commuting patterns are constantly changing; indeed, it should be the frequency of rail service that influences people's schedules, rather than the other way around. It should be a goal to ensure that no passenger ever waits more than 5 minutes for the next train. (0290, 0290-L -2)

Public Comment: Because of the additional distance involved in travel to and from downtown DC, it is important that trains run later into the evening than they currently do along the Orange line. The significant ridership seen now on Fridays and Saturdays, when Metrorail runs to 2:00 a.m., will certainly increase with Dulles Corridor passengers. The schedule must be extended, ideally past 2:00 seven nights a week, to allow as many riders as possible to use Metro. (0290, 0290-L -3)

Response: *Changes to WMATA policies regarding mid-day service frequencies, hours of service, and holding of trains to meet late night arrivals of planes at Dulles Airport are outside the scope of this Project, and would be the responsibility of the WMATA Board of Directors. The Metrorail operating plan in support of the Final EIS has headways of seven minutes for the sake of service reliability.*

Public Comment: There must be a provision to hold the last train of the night until after the last plane arrives at Dulles. Occasionally, planes are delayed beyond their scheduled arrival time; in that case, Metro must remain open. Arriving passengers may be counting on riding Metrorail to their destinations. This is an easy step to take to ensure that people who fly can have confidence in the availability of Metro to get to and from the airport. Intermodal cooperation such as this is key to gaining public support and increased ridership. In contrast, a stranded traveler will be a customer lost. Similarly, trains must begin running early enough in the morning -- seven days a week! -- to allow passengers from the farthest reaches of the system to reach Dulles Airport in time for the earliest scheduled flights. Not taking this step would exclude and alienate a significant number of potential riders. (0290, 0290-L -5)

Response: *Formulation of policies on holding trains to meet late-night arrivals and early flights of planes at Dulles Airport is outside the scope of this Project, and would be the responsibility of the WMATA Board of Directors.*

Clarify Metrorail and BRT Deadhead Costs

Public Comment: What are the deadhead costs for the BRT system versus rail? (0112, 0382-L -17)

Public Comment: You refer to "deadhead costs." In table 3-7, you say that to place the rail maintenance yard at the end of the line, there will be about \$4,500 per day in deadhead costs each day. Is that for the

entire system or just Dulles Rail and what would be the annualized costs of deadhead for each service yard alternative? What are the deadhead costs for the BRT system versus rail? (0112, 0462-L –44) (0112, 0382-L –16)

Response: *In the Draft EIS, deadhead costs were calculated as part of the overall costs for BRT but were not broken out specifically because this data was not needed for any analysis purposes. Metrorail deadhead costs were broken out because this data was required to compare alternative yard sites. The data in the table represented daily deadhead costs incurred at each yard site only, and did not reflect costs associated with the entire system. The Project Team recommended and the decision-makers selected the Yard Site Y15 on Dulles Airport property.*

Consider Short Turning Service and Shuttle in Tysons Corner Area

Public Comment: Operations -- There was no consideration in the operation section of short line service terminating at the Tysons West or Tysons East Stations even though both include pocket tracks to accommodate the short line turnback movement. Tysons West could serve as a short line terminus for service between Tysons Corner and the core or some point further east. Tysons East could serve as the inbound terminus of service between Loudoun County and Tysons. Implementing this short line service would produce a savings in operating costs and may also reduce rail car requirements. The consideration of short line service appears to be supported by the ridership projections. In the OB direction, more than half of the Dulles Corridor riders disembark from the rail system at Tysons Corner. In the IB direction, approximately 1/4 of the riders who board the train OB of Tysons Corner will disembark at Tysons which suggests that not all of the Dulles service needs to continue IB toward the core. This cut back would facilitate the merge with the Orange Line at WFC and the Blue Line at Rosslyn. The operations analysis also needs to examine a Tysons shuttle between Tysons East and West Stations to provide internal service within Tysons. This service would be particularly useful during off peak periods to facilitate travel within Tysons for work, shopping, dining etc. and I believe that it could produce a measurable ridership increase, all of which would be new riders. It's very probable that this service could also be provided without the need to purchase additional rail cars. (0387, 0387-L –14)

Response: *No consideration was given to short turning service in Tysons Corner because the significant majority of corridor riders are traveling beyond Tysons. Dulles Corridor trains will be replacing supplemental Orange Line service currently in operation. This supplemental service is used to relieve overcrowding on the Orange Line. A shuttle within Tysons Corner is no longer possible, since the pocket track at Tysons East Station was eliminated.*

B. Supplemental Draft EIS Comments

Federal Agency Comments

Impacts of Project Phasing

Federal Comment: Phasing of the project does appear to adversely effect early year ridership numbers and thus may have less of an air quality and traffic benefit in the short run as compared to an early full build out. (0085 0100-1)

Response: *Ridership is not as high in the Wiehle Avenue Extension as it is in the Full LPA. Therefore some of the benefits resulting from higher ridership may not accrue until the Full LPA is completed. The impacts of phasing on air quality and traffic are documented in Chapters 4 and 6, respectively, of the Final EIS.*

Local Agency Comments

Impacts of Project Phasing

Local Comment: Table 6.2-3 Is it reasonable to expect that in 2025 for LPA I only, PNR trips will

decrease? It seems that once garages fill up, they remain that way. Also, with the Full LPA, bus trips appear to drop significantly. Is that reasonable to expect? (0093 0109-4)

Response: *Peak hour park-and-ride trips at Wiehle Avenue Station might decline between the opening year 2011 and the forecast year 2025 for the Wiehle Avenue Extension, because fewer trips might arrive in the peak hour of arrival. Bus trips decrease significantly after implementation of the Full LPA because Wiehle Avenue would no longer be an end-of-line station; so, many of those bus trips would board at other stations.*

Public Comments

Accommodating Eight Car Trains

Public Comment: Again, the project team assumed eight car trains on the line to Wiehle. Metro now cannot run eight-car trains due to insufficient traction power. How is Metro going to upgrade its system to handle 8-car trains so you run 8-car trains on the Wiehle line? (0016 0122-6)

Response: *Under its Metro Matters campaign, WMATA is presently obtaining funding of its near-term capital needs to sustain the Metrorail and Metrobus systems. Within the \$1.5 billion Metro Matters campaign, there is over \$600 million for the eight-car train operations.*

Impacts of Project Phasing

Public Comment: In addition, the ridership and other projections used to justify Phase I assume that Phase II will be built, even though the FTA has clearly stated that Phase II is a separate project for purposes of funding. This analysis is highly misleading, because it misleads the public about the true likelihood of completing Phase II, and about the true benefits of building Phase I. (0063 0151-5)

Response: *The ridership forecasts for the Wiehle Avenue Extension make no assumptions about the likelihood of the Full LPA being implemented. The Wiehle Avenue Extension ridership forecasts are based on the service definition described for Extension in the Final EIS, which is a combination of local bus services, Corridor express bus serving Wiehle Avenue, and Metrorail service at Wiehle Avenue Station on 7 minute headways.*

Travel Time Savings

Public Comment: Additionally, should rail become a reality with four stops as proposed in Tysons Corner, my commute to L'Enfant Plaza on the Orange Line would be made more time consuming than it already is. I am not pleased with the plan as it is presently proposed. (0035 0036-2)

Response: *For passengers accessing transit in the peak direction from West Falls Church, Dunn Loring, and Vienna stations, there will be a marginal increase in transit travel times under the Wiehle Avenue Extension or the Full LPA relative to existing conditions. However, for the majority of origin points within the corridor, transit travel times will decrease. In addition, significant improvement in travel times will occur for passengers making trips in the reverse peak direction. This improvement is based on the much higher frequency of outbound service relative to today's service and also because there is direct service to key destinations in the corridor for reverse peak trips.*

The run time for Metrorail from Wiehle Avenue to East Falls Church Stations (the first Metrorail station served by the Dulles Corridor service) would be approximately 15 minutes (with a transfer time of 2 minutes, the total trip would be about 17 minutes). Travel time from Wiehle Avenue to West Falls Church Stations via the existing Fairfax Connector 980 service is about 15 minutes. However, people are required to transfer to Metrorail at West Falls Church, thus adding 2 minutes for a total of approximately 17 minutes.

Public Comment: SDEIS, 6.1.3, states, the proposed LPA Phase 1 would improve the convenience of existing service, but would not provide the same degree of improvements as the full LPA. Travel time savings would not be as great for proposed LPA Phase 1, and transfer requirements would generally not improve over the No Build. According to the SDEIS, FTA has determined that the first phase now being considered for funding has independent utility even if the subsequent phase is never built. Therefore, using the information in 6.1.3.1, demonstrate your analysis in table format showing transit travel time between the trip from LPA Phase 1 for points east, including BRT and Premium Bus Service. (0109 0128-9)

Response: *During the preparation of the Draft EIS, a number of other modes, including Bus Rapid Transit, were considered for the Dulles Corridor Rapid Transit Project. Based on the analysis contained in the Draft EIS, public hearings held in July 2002, and comments received on the Draft EIS, the Metrorail Alternative (T6/Y15) was selected as the Locally Preferred Alternative (LPA) a by the Commonwealth Transportation Board (CTB) and by the WMATA Board of Directors in late 2002. The purpose of the Supplemental Draft EIS was to provide additional information on refinements that have been made to the LPA since the publication of the Draft EIS Public Hearings Report. As such, the analysis of transit travel times in Section 6.1.3 of the Supplemental Draft EIS presents a comparison of travels times under the Full LPA and the Wiehle Avenue Extension compared to the No Build Alternative.*

Maintain Express Bus Service

Public Comment: Ensure that we maintain express bus service from Wiehle to Pentagon and Crystal City for the people who wish to go that way. (0064 0072-5)

Response: *The bus operating plans used in the Final EIS assumed that Loudoun County express service to the core was maintained. Otherwise, all Fairfax Connector Corridor express bus routes feed into Wiehle Avenue Station.*

Rosslyn Tunnel Capacity

Public Comment: With the current Orange line tunnel in periodic failure, is it not safe to assume heavy rail line passenger increases could create a requirement for new expensive unplanned tunnel? What will be the impact on the current Orange line tunnel? What mitigation options are proposed to relieve this impact? What is the capital cost to implement these mitigation measures? What is the funding source for meeting the capital cost? (0107 0125-15)

Public Comment: Explain how the Rosslyn Tunnel, which is already operating over capacity, will be able to handle the addition of the Silver Line to the existing Orange and Blue Lines. (0063 0151-18)

Public Comment: The Orange Line already is over capacity. To prevent further crowding in the Rosslyn Tunnel, some Orange Line trains will need to be removed to make room for Silver Line trains. Please explain how projected growth in Orange Line demand will be met. (0063 0151-17)

Response: *Assessment of an additional tunnel between Virginia and Washington D.C. is not within the scope of this project. The Metrorail operating plan in support of the Final EIS reflects the overall capacity of the Rosslyn tunnel of 26 trains in the peak direction during the peak hour.*

To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by

the WMATA Metro Matters program and by the Extension project. The next paragraph relates the number of cars to train loading.

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

Ridership Forecasts and Mode Split

Public Comment: We also suggest that Fairfax County re-evaluate its mode split data in all future traffic analysis associated with rezoning applications requested for increase in density at rail stops. The current Tysons Plan assumes a 20% mode split and a Level of Service F as the acceptable basis for any traffic study accompanying a land use application. Table 6.1-3 refers to a 16.1% mode split assumption so the Comprehensive Plan formula assumption must be modified to meet the realities cited in this EIS. (0113 0132-10)

Response: Fairfax County's use of a 20 percent mode share includes trips by Metrorail, transit bus, car pooling and van pooling. The 13 percent in Table 6.1-5 of the Final EIS is the Metrorail share of trips.

Public Comment: The project model predicts that ridership at the WFC station will decrease; this makes no sense at all. (0026 0027-10)

Response: Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.

Public Comment: Outside of New York City, no rail line carries as many passengers as a pair of freeway lanes. Right here in our area, we do not believe that any part of the WMATA system in the suburbs carries as many passengers as a pair of adjoining freeway lanes. Please confirm or deny. (0061 0069-13)

Response: A pair of freeway lanes would carry 3,600 vehicles per hour under acceptable traffic operations (LOS D, wherein traffic is generally free flowing, though with some delay – 1,800 vehicles per hour per lane) and 4,800 at full capacity (LOS F, wherein traffic operations are severely degraded). The Orange Line to Vienna service is forecasted to carry approximately 11,000 passengers per hour at its maximum load point in the No-Build condition in 2025 (this is forecasted demand on the Orange Line if the Full LPA is not constructed). In general, rail transit provides much higher capacities than highways. ,

Public Comment: how many of your 25,000 riders are new versus people who used buses or came off the Orange Line. (0016 0122-10)

Response: Ridership estimates indicate there would be approximately 48000 new transit riders per day regionally in 2025 under the Full LPA. These are people that currently do not use transit.

Operating Characteristics of Metrorail and Bus Service

Public Comment: While promising a “seamless” ride on the proposed “Silver Line,” the project has never explained how it plans to accommodate demand on the Orange Line train if every other train is a Silver train. In this SDEIS, you are proposing to terminate the Silver Line at Stadium Armory and requiring a transfer there to New Carrollton. (0016 0122-22)

Response: *With the Dulles Corridor Metrorail Project, the Orange Line through the core of the Metrorail system receives more service. The Orange Line supplemental service of 2004 and the No-Build Alternative (known as trippers) are one-direction during the peak hour. The Dulles Corridor trains replace the trippers and operate during all revenue hours, although turning back at Stadium-Armory.*

To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by the WMATA Metro Matters program and by the Extension project. The next paragraph relates the number of cars to train loading.

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers ‘passed-by’ on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

Public Comment: Increased frequency of feeder bus service would help reduce demand for parking at that lot and generate transit ridership. (0060 0169-13)

Response: *The feeder bus plans utilized in the Final EIS reflect the plans and available resources of the bus systems of the two Counties. Revising these services would be the responsibility of Fairfax and Loudoun Counties.*

Capacity and Use of Transit and Highway Facilities

Public Comment: Please compare and contrast the ridership, boarding, and hourly throughput for the proposed Silver Line with the existing Orange Line. Compare the passenger throughput for each line, (one actual, one proposed) with the vehicle and passenger throughput on the Dulles Toll Road and I-66 paralleling both lines. Calculate these figures in a way that can be compared with the collection methodology that VDOT uses to determine the intensity of highway use at particular hours. Conclude from these numbers whether or not the rail lines carry more or less vehicles or people than a pair of adjacent highway lanes. Make this calculation for peak hours and non-peak hours and for the day as a whole. (0061 0117-16)

Public Comment: There are peak hours for rail users. What are the rail volume averages for the Wiehle Avenue station? How does this compare to the volume averages of the adjacent Dulles Toll Road? For

example, does the rail carry more or less the volume carried by the inbound and outbound Dulles Toll Road? (0109 0128-10)

Response: *In 2025, peak hour loads at the maximum load point on the Dulles Corridor service under the Full LPA is forecast to be approximately 8,640, while on the Orange Line service it would be approximately 10,100. Each lane of I-66 and the Dulles Toll Road can carry approximately 1,800 vehicles at reasonable free flowing speeds and 2,400 cars at greatly deteriorated service. Assuming average vehicle occupancy rate of 1.1, the two Metrorail lines would carry more people than the adjacent highways.*

Public Comment: We do not believe projections that rail technology will attract three and a half times as many riders as an altered and improved mixed transit system incorporating best available technology. (0061 0136-8)

Response: *The travel demand forecast model used to develop the project ridership forecasts utilizes the most recent data on mode preference, based on significant research into this subject. The ridership forecasts reflect these preference patterns.*

Public Comment: We would like to see capacity figures for the current bus system because we suspect it already has substantial excess capacity. (0061 0136-9)

Response: *It is the understanding of the Project Team, that certain Fairfax Connector buses between Herndon-Monroe transit center and West Falls Church Station have standees. In general, bus system capacity is based on the frequency of service. The bus service assumed for the No-Build and for the two Build Alternatives is outlined in the Transit Operations and Maintenance Plan prepared in support of the Final EIS.*

Travel Times of Transit Verses Automobiles

Public Comment: The SDEIS claims that transit times will be competitive with auto for many routes, we don't agree with that; most studies say that auto trips are half the time. (0061 0136-6)

Response: *The transit travel times or auto travel times identified in the Draft EIS, Supplemental Draft EIS or Final EIS are door to door. Instead, the times are calculated between the centers of transportation analysis zones (TAZ) that represent areas of the region (for instance, Reston is divided into approximately five TAZs). The use of TAZs is typical in travel demand forecasting. Vehicle travel time for automobiles is based on observed data and is included in the demand forecasting modeling package, which attaches a travel time to each link in the regional highway network (this is based on observed data). Transit travel times are based on a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations.*

Public Comment: The SDEIS claims that transit times will be competitive with auto for many routes. Practical experience in driving routes currently served by existing Metro service does not support this assumption. Most businesses in the Tyson's area will be outside of ¼ mile radius from a station that many people believe is an acceptable distance to walk to work. This would suggest that most people would continue to drive to their place of employment. Additionally, express bus service to West Falls Church Metro Station will be terminated if rail is implemented in order to increase passenger ridership. This could have the opposite action of encouraging people to continue driving to employment destinations. (0110 0129-3)

Response: *Each of the factors that impact the mode choice of potential riders such as travel time on competing modes and access to final destinations is factored into the travel demand forecasting model. The forecasted ridership results reported in the Draft EIS, Supplemental Draft EIS and Final EIS already reflect these factors. The impacts of changes in bus service to West Falls Church have also been reflected in the model assumptions.*

Transit Travel Time Assumptions

Public Comment: The SDEIS claims that transit times will be competitive with auto for many routes. For door-to-door trips, we dispute this claim. Please explain your methodology. (0061 0069-7)

Public Comment: The project team has dramatically overestimated the “travel time savings” of rail over other modes, especially compared with the high-occupancy vehicle (HOV) and transit bus modes from anywhere in the Dulles Corridor to Ballston, Rosslyn, the Pentagon, and downtown Washington, D.C. (0016 0122-15)

Public Comment: The SDEIS claims that transit times will be competitive with auto for many routes. For door to door transportation, we dispute this claim. Explain how you arrived at this conclusion. For what percentage of trips on the corridor would transit travel times be competitive with auto? (0061 0117-7)

***Response:** Neither the transit travel times or auto travel times originally identified in the Supplemental Draft EIS and included again in the Final EIS are door to door. Instead, the times are calculated between the centers of Transportation Analysis Zones (TAZs) that represent areas of the region (for instance, Reston is divided into approximately five TAZs). The use of transportation analysis zones is typical in travel demand forecasting. Vehicle travel time for automobiles is based on the demand forecasting modeling package, which attaches a travel time to each link in the regional highway network (this is based on observed data). Transit travel times were based on a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and the distance between stations.*

Parking Impacts on Ridership Forecasts

Public Comment: The number of planned parking spaces appears to have been reduced. How will the ridership projections be met if parking is reduced? (0063 0151-15)

Public Comment: Ridership Numbers are Inflated: Ridership numbers are highly unrealistic because the parking has been slashed at the stations but only meager offsetting adjustments have been made to the ridership which will certainly be reduced commensurate to the parking reductions. (0072 0150-3)

Public Comment: Revise the patronage figures for rail to reflect the removal of the structured parking garage from the Wiehle Avenue terminus. Study the relationship between parking available for suburban locations and usage and project from this study the amount by which use of the Wiehle terminus would be reduced if no new parking were built there. (0061 0117-17)

***Response:** The travel demand forecasts reported in the Draft EIS, Supplemental Draft EIS and Final EIS take into account the planned park-and-ride capacity at each Metrorail station. Ridership arriving at each station by automobile is constrained, if necessary, by park-and-ride capacity limitations. The Project Team does not anticipate a reduction in the proposed park-and-ride capacity at the Wiehle Avenue Station.*

Transit Travel Times

Public Comment: What will be the increase in travel time for the bus rider who now travels from Reston East to West Falls Church metro but will now have to ride the proposed rail system with four stops in Tysons Corner? (0107 0125-10)

Public Comment: What is the travel time for the rail riders going from the Wiehle station to the West Falls Church Station? How does this compare to the travel time of the present bus riders who use Reston East to get to West Falls Church? Is there an increase in travel time? If so, then using the statement

related to longer transit trips reduces the attractiveness of the transit mode, describe the possible impact to ridership. (0109 0128-11)

Response: *The travel times would be similar. Run times for Metrorail from Wiehle Avenue to East Falls Church Stations (the first Metrorail station served by the Dulles Corridor service) would be approximately 15 minutes. Travel time from Wiehle Avenue to West Falls Church Stations via the existing Fairfax Connector 980 service is about 15 minutes. However, people are required to transfer to Metrorail at West Falls Church, thus adding 2 minutes for a total of approximately 17 minutes.*

Transferring Bus Riders to Metrorail

Public Comment: what is the economic impact on the present bus rider who will be forced to take the proposed rail system or return to their automobiles? (0107 0125-12)

Response: *Some transit bus riders from south of Tysons Corner on bus routes along Route 7 would be forced to transfer to Metrorail at West Falls Church Station to travel to Tysons Corner. No bus rider from the western part of the corridor within Fairfax County who does not currently transfer to Metrorail would be forced to transfer to Metrorail in the future. The only difference between today's bus operations in the western part of the corridor in Fairfax County and the operations defined in the Final EIS are that people who currently transfer to Metrorail from bus at West Falls Church Station would transfer at Wiehle Avenue Station*

Development Impacts on Ridership

Public Comment: What percentage of ridership from Wiehle station to Tysons corner comes from the former bus riders? (0109 0128-12)

Public Comment: Bus riders will be forced to use rail because the Reston East bus route to West Falls Church will be eliminated. What percentage of ridership from Wiehle station to West Falls Church comes from the former Reston East bus riders? (0109 0128-13)

Response: *It is anticipated that most users of the current express service would change to Metrorail. Exact statistics would require a boarding survey after the Metrorail service is in operation.*

Public Comment: The revised DEIS notes that ridership likely would increase 15% with "density bonuses" and that the projections do not include airport users. Consequently, even on a conservative basis the rider ship is understated by at least 20%! (0108 0127-9)

Response: *The project's ridership forecasts are based on regionally-adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with Metrorail are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Final EIS. . Airport users are included in the demand forecasts reported in the Final EIS, but may be understated because of the lack of comparable data with which to forecast this ridership, which does not follow typical commuting patterns.*

Budget Impacts on Ridership Potential

Public Comment: WMATA has a \$48M deficit in next year's budget, and needs \$274.5M for projects labeled urgent over the next five years. This deficit produces a budget headache that could prevent WMATA from running 8 car trains. How will this impact the projected increase ridership on the Orange Line, which requires 8 car trains to meet the projected level of efficiency? (0109 0128-18)

Response: Under its Metro Matters campaign (, WMATA is presently obtaining funding of its near-term capital needs to sustain the Metrorail and Metrobus systems. Within the \$1.5 billion Metro Matters campaign, there is over \$600 million for the eight-car train operations.

Public Comment: WMATA had capital plans to buy 650 new buses and can now only buy 380. Bus routes are being eliminated. For every 10% fare increase ridership drops by 0.36% The fare increases and the increase in parking fees are reality issues. Describe how these issues were factored in for ridership projections for 2009? (0109 0128-19)

Response: All factors that impact on mode choice, including fares, parking fees, and the bus network (factors identified by the commenter) are fundamental elements of the demand forecasting model. Assumptions regarding these factors are implicit in the demand forecasting results.

Ridership for Work Trips

Public Comment: What percent of the riders who work in the Tyson's Corner area will use the proposed rail from Wiehle Avenue Station to reach their place of employment? (0109 0128-2)

Public Comment: Residents in the Washington region now use transit for about 4.5% of all daily trips. (Washington Post, B-9, 7/17/02) What percent of the employees who work in the Tyson's area will use rail to reach their place of employment? (0109 0128-1)

Response: This data is shown in Chapter 6 of the Final EIS. The transit share of all trips to Tysons Corner under the proposed Wiehle Avenue Extension is approximately 13 percent.

Maintain Current Bus Services

Public Comment: Will the present bus service from Reston East to West Falls Church be eliminated? (0107 0125-11)

Response: Under both the proposed Wiehle Avenue Extension and the Full LPA, bus service that currently serves the Reston East Park-and-Ride before continuing to West Falls Church would terminate at the Wiehle Avenue Metrorail station.

Consider Impacts of “Just in Time” Carpoolers

Public Comment: Determine the number of just in time carpoolers (sluggers) using Herndon Monroe parking station or any other stop. Compare this use of slugging with that experienced along the Shirley Highway. Revise the no-build alternative numbers to incorporate formalized slugging to attract at least the same percentage of commuters as the Shirley Highway. How will this affect peak hour public transit demand? (0061 0117-14)

Response: The issue of “slugging” in the Dulles Corridor was addressed in the Public Hearings Report for the Draft EIS. The issues associated with implementing just-in-time ridesharing zones in the Dulles Corridor and the possible benefits of increased HOV were explored as part of the Project Team’s review of Dulles Plan B. Neither the Project Team nor VDOT could develop facilities with the express purpose of encouraging just-in-time ridesharing (also known as “slugging” or casual carpooling) because of the tremendous liability risk associated with such activities. While these agencies recognize the benefits that have been gained in the I-95/I-395 corridor through this informal ridesharing arrangement, the random pairing of drivers and passengers inherent in this form of commuting presents risks that most public agencies are not prepared to assume.

Ridership Estimates Seem Overly Optimistic

Public Comment: A defensible and objective ridership analysis needs to be included in the SDEIS. The projected ridership data is unrealistic (e.g., at 2-17 and S-12 and TABLE 2-2). The authors have failed to present a defensible basis for inflated ridership data. (0068 0173-15)

Public Comment: Many of us would question ridership forecasts as wildly optimistic, even with massive development or redevelopment of rail oriented sites. Plans for the Wiehle Avenue site are the densest in all of Reston, with an FAR of 2.5. As VDOT said in its critique of the original DEIS, while rail might produce some slight alleviation of East-West congestion, north-south roads will be overwhelmed by density increases. (0096 0112-3)

Response: *The methodology for completing the ridership forecasts were outlined in detail in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002) prepared parting support of the Draft EIS. This same methodology was used in the Final EIS analysis as well. This modeling methodology is based on commonly accepted and widely used forecasting techniques applied on projects throughout the United States. Further, the forecast results have been calibrated to existing ridership on Metrorail, thus providing an additional measure of accuracy.*

6.2 Effects on Roadways

A. Draft EIS Comments

State Agency Comments

Include Roadway Improvements in CLRP

State Comment: Pg. 6.6, 2nd to last paragraph: "VDOT is planning several major roadway improvements along Routes 7 and 123 in Tysons Corner . . . Widening of Routes 7 and 123, and the construction of grade-separated interchanges at Route 7/Westpark Drive, Route 7/International Drive, and Route 123/International Drive . . . By 2010." (Recall 8/4/00 letter by Tom Farley, included in report's Appendix, asking that the team consider and evaluate the improvements planned by 2010 that are included in the Fairfax County Comprehensive Plan and the regionally adopted Constrained Long Range Plan CLRP). (0421, 0421-A –18)

Response: *All improvements planned by the opening year and forecast year of the two Build Alternatives of the Final EIS that are included in regional transportation plans are considered in the analysis that support the Final EIS. The exceptions are the proposed interchanges of Route 7 and Route 123 in Tysons Corner as identified by the Fairfax County in its Comprehensive Plan. Those interchanges are not yet recognized by regional plans. All improvements included in the regionally adopted Constrained Long Range Plan that are located in Fairfax County are included in the analysis.*

Local Agency Comments

Traffic Impacts on Access Roads to Stations

Local Comment: In other words, what good is this transit system if you can't get to it? And you can't get to it unless you address systematically the neighborhood streets, the transit services that provide transportation, conceivably, to this important new addition to the region, and in otherwise provide for a much greater area than is provided for now. We know that the highways in the area that potentially would be accessed for this system are already significantly under stress and, frankly, break down regularly as effective transportation corridors. And those include Route 7, Route 29, Route 66, and many other neighborhood highways. (0165, 0165-T –6)

Response: *The Project Team agrees that the Metrorail Extension will not resolve traffic gridlock; however, it would provide an alternative to driving the automobile, which in turn would help to improve air quality in the corridor. As outlined in Chapter 6 of the Final EIS, the Metrorail Extension will substantially increase the transportation capacity of the corridor (i.e., the number of travelers that can be comfortably accommodated in the corridor during peak travel times), relative to the No-Build Alternative. In theory, every "new rider" generated by this project would result in one less automobile on the Dulles Toll Road or other regional roadways.*

More Intersections Should Be Studied in the City of Falls Church

Local Comment: Impacts - The traffic impacts are more far reaching than the intersections studied. The City [of Falls Church] had requested that thirteen (13) key intersections be studied and is disappointed to find only three (3) were considered. The City continues to believe this project may have a significant impact on Falls Church and its environs requiring analyses that would include secondary and cumulative effects of traffic increases through existing neighborhoods. This potential for increased commuter "cut through" traffic needs to be monitored and will require the collection of additional traffic counts. (0122, 0122-A -15)

Response: *The three intersections included in the traffic analysis for the Orange Line Connection section of project corridor were selected based on their proximity to the West Falls Church Metrorail Station. These three major intersections are directly adjacent to the station and have the potential to experience the greatest impact, if any, from the project. Based on the results of the analysis, it can be inferred that the intersections directly adjacent to the three under study would also receive the same impact since they are located in close proximity to each other. Moreover, the further away the intersections are located from the station area, the less likely project-related impacts would be felt.*

A secondary effect is an indirect effect. In other words, they are caused by the proposed action, but will occur later in time or further in distance than the other direct impacts from the project. With regard to the Dulles Corridor Rapid Transit Project, secondary effects would be those resulting from the increased density of development that would occur because local government have plans in place that allow for greater density in some areas if transit is provided (known as density bonuses). These effects could include increased traffic congestion. While it is expected that increased density will result in localized traffic congestion in some of the station areas, the new transit-oriented urban form will help to increase the overall mobility in the corridor, counties, and the region. The Project Team, however, disagrees that secondary traffic would be a problem for the residents of Falls Church. Secondary and Cumulative impacts of transit-related growth were analyzed in Chapter 9 of the Final EIS and the Economics and Secondary Development Effects Technical Report (June 2002). No assessment of secondary development impacts was undertaken for West Falls Church because density bonuses are not allowed in this area.

The Project Team did not analyze the potential for overflow parking nor cut-through traffic on neighborhood streets. The Project Team did initiate meetings with the City of Falls Church to discuss these issues.

Local Comment: Equity - The City [of Falls Church] is more directly impacted than other communities, but these impacts were not analyzed at the same level of detail as the proposed Metro stations. Unlike the planned stations in Tyson's Corner, the impact of traffic overflow will be felt on adjacent residential streets causing safety concerns for our residents. It is puzzling to then contrast that only the three (3) directly adjacent intersections at the West Falls Church Metro area were analyzed, whereas, for the new stations, as many as nine (9) and an average of five (5) adjacent intersections were analyzed. (0122, 0122-A -16)

Response: *As part of the Dulles Corridor Rapid Transit Project, four stations are anticipated to be constructed in Tysons Corner, some of which would have overlapping station area impacts.*

Relative to the City of Falls Church and the other sections of the corridor, the effects of the project on the Tysons Corner area would be much greater than that at the West Falls Church Station. Metrorail service is currently provided for the West Falls Church Station and no project improvements are planned there for either Metrorail Alternative. As shown in Chapter 6 of Final EIS on average, three to four intersections were analyzed for each of the Mid-corridor and Loudoun County Stations. More intersections may have been analyzed due to station facilities (i.e., Kiss & Ride and park-and-ride spaces) being provided on the north and south sides of the Dulles Toll Road.

The three intersections included in the traffic analysis for the Orange Line Connection section of project corridor were selected based on their proximity to the West Falls Church Metrorail Station. These three major intersections are directly adjacent to the station and would therefore experience the greatest impact, if any, from the project. Based on the results of the analysis, it can be inferred that the intersections directly adjacent to the three under study would also receive the same impact since they are located in close proximity to each other. Moreover, the further away the intersections are located from the station area, the less likely project-related impacts would be felt.

Traffic Impacts May Limit Development Potential in the City of Falls Church

Local Comment: Safety/ Infrastructure - The City is unique in that the West Falls Church Metro area is directly adjacent to City owned property, which includes the George Mason Middle and High Schools, as well as the UVA/ Virginia Tech Grad Center. - Assumptions - The assumption that failing roadways should accommodate more traffic without improvements is flawed. One of the major goals of the Project is to support future development. However, in reality, the Project may actually prohibit such future development in the area and severely limit the City's [of Falls Church] future economic development potential because existing roads are now operating at near or full traffic capacity. (0122, 0122-A –21)

Response: *It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing traffic/roadway capacity problems. The Final EIS does not assert that failing roadways should be able to accommodate more traffic without improvements. Chapter 6 of the Final EIS states that increases in vehicle trips are not anticipated for the West Falls Church Station as a result of either of the two Build Alternatives. . This is primarily a result of the addition of transit park-and-ride capacity in the mid-corridor. Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

Traffic and Mitigation Measures Not Fully Addressed for the City of Falls Church

Local Comment: Mitigation measures - Table 6.2-6, "Summary of Traffic Issues and Proposed Mitigation Measures," does not address or consider Falls Church traffic issues or propose mitigation measures. (0122, 0122-A –17)

Response: *The Dulles Corridor Rapid Transit Project will not substantially expand service at either the East or West Falls Church Metrorail Stations. The Final EIS states that large increases in vehicle trips are not anticipated for the West Falls Church Station area for either of the Metrorail Alternatives. This is primarily due to the addition of transit parking elsewhere in the Dulles Corridor. Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

Public Safety and Infrastructure Not Addressed for the City of Falls Church

Local Comment: Equity- Public safety and infrastructure improvements are included in the EIS recommendations for many other impacted areas, but not for the City of Falls Church. (0122, 0122-A – 23)

Local Comment: The draft EIS has failed to adequately address public safety and infrastructure issues regarding pedestrian traffic, especially students conflicting with vehicular traffic in and around the West Falls Church metro station, given the prediction for increased vehicle trips per day. Our middle school and high school are adjacent to that station. (0122, 0164-T –5)

Response: *As stated in Chapter 3 of the Final EIS, the study area for safety and security was the limit of disturbance for the Metrorail Extension. Since neither the West Falls Church nor East Falls Church Metrorail Station would require major improvements as part of the Extension, these stations fall outside the limit of disturbance and therefore were not analyzed. In addition, the Final EIS states that increases in vehicle trips are not anticipated for the West Falls Church Station area for either of the two Build Alternatives. This primarily would be due to the addition of transit parking in the Mid-corridor.*

Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.

Hours of Delay Measure

Local Comment: Hours of delay may provide a more realistic and meaningful measure of traffic impacts than the LOS and seconds of delay measure used in the DEIS. (0479, 0479-L –4)

Response: *Comment noted. Since the review period of the Draft EIS, FTA has instituted a measure of travel time savings in hours for its evaluation of New Starts projects.*

Potential Impacts to City of Falls Church

Local Comment: I am pleased to provide the following "Impact Evaluation" for the referenced draft EIS report dated January 28, 2002 (including revised Section 8.0 dated March 15, 2002). This brief evaluation reviews this EIS report in consideration of possible impacts to the City of Falls Church, particularly the affected Metrorail stations and environs with the City of Falls Church. Based on my evaluation of this report (and revised Section 8.0 attachment), I offer the following observations and comments (presented in order by Section of the EIS report):

Section 1.0 -- No comment.

Section 2.2 -- It is noted that the BRT alternative includes modification to the West Falls Church Metro Station.

Section 3 -- No comment.

Section 4 -- No comment.

Figure 5-1-- At the Haycock Rd./Falls Reach Drive intersection, it is shown that the predominant AM inbound flow is from Great Falls Street, yet the predominant PM outbound flow is to the other direction (towards Rt.7). This is a curious traffic pattern where the predominant outbound trips (from West Falls Church Metro Station) are opposite of the predominant inbound trips. This should be explained further.

Figure 5-17 -- At the Haycock Rd./Falls Reach Drive intersection, there are "movements" going into an unmarked road opposite Falls Reach Drive. Perhaps this unmarked road is one-way, yet nothing is shown on this graphic. This should be explained further.

Section 5.3.2 - Roadway analysis was performed for eight (8) roadway segments, not including Rt. 7 near Falls Church (e.g., near Haycock Road). Why not? It seems this important eastern end of the study area should have been included.

Section 6.1 -- Level of Service (LOS) analyses were conducted for selected highway links, but not Rt. 7. Why not? Again, it seems this important highway corridor within the study area should have been included.

Section 7.1 -- A general statement is made that "...traffic impacts within the Orange Line Connection sub area of the corridor are not expected to be significant." On what basis is this general statement made? On what proof or evidence can this be made?

Section 7.1 -- It is stated that "...no formal analysis of park/kiss-and-ride entries and exits or the nearby local road network was undertaken for the East Falls Church metro station area..." due to insignificant increase in traffic near the station, yet it is also stated that "...implementation of either the Metrorail or BRT/Metrorail Alternative would result in increased off-peak service frequencies at East Falls Church for eastbound trains..." These statements seem contradictory. An explanation of how increased off-peak service creates no significant increase in traffic near the affected station needs to be clarified.

Section 8.2 (March 15, 2002) -- It is stated that none of the planned changes to the West Falls Church Metro station are assumed in the analysis, yet no explanation is provided as to why? Also, isn't a parking garage being planned/programmed for this station? If so, why isn't this included in the analysis?

Table 8-1 (March 15, 2002) -- This table shows exactly the same LOS and delay for the RT.7/Haycock Rd. and Haycock Rd./West Falls Church Station Parking Entrance intersections during the AM and PM peak hours for the 2025 Baseline condition. It is highly unlikely that this coincidence would occur. This needs to be checked and verified.

Section 8.3.1 (March 15, 2002) -- Under the "BRT Alternative" it is stated twice that the Rt. 7/Haycock Rd. intersection would improve to LOS C in the PM peak hour. I believe that this applies to the AM peak hour as well (per Table 8-1).

Section 8.3.1 (March 15, 2002) -- Under the "BRT Alternative" it is stated that "...any of the build alternatives would reduce the demand for parking at the West Falls Church Station ...", yet no evidence is presented to support this finding.

Section 8.3.2 (March 15, 2002) - It is stated here that "...only selected intersections and station entrances/exits are analyzed." It is curious why the most impacted intersection in the West Falls Church Metro Station area (Great Falls Rd./Haycock Rd. intersection was not part of the analysis.

Section 8.3.2 (March 15, 2002) -- It is stated here that "...because it is the controlling time period for the design year, only the PM peak hour conditions have been analyzed..." Since the area near the West Falls Church Metro Station (i.e., Rt.7/Haycock Rd. intersection area) is directly influenced by the adjacent educational facilities, thus directly and strongly influenced during the AM peak hour much more than the PM peak hour, it is questionable why only the PM peak hour was analyzed, and not the AM peak hour.

Section 8.5 (March 15, 2002) -- It is stated that since "... the project is not anticipated to have a negative impact on adjacent intersections, analysis of pedestrian and bicycle access and circulation was not undertaken." In light of prior comments and uncertainties, it is not necessarily factual that no negative impact has been afforded at adjacent intersections, thus perhaps pedestrian and bicycle access and circulation should be conducted.

Section 8.6 (March 15, 2002) -- It is claimed that the measured "delay" impact is not significant enough to warrant mitigation. Under what criteria is this based? This seems to be objective.

Figure 8-1 (March 15, 2002) The predominate PM peak hour traffic flow out of Falls Reach Drive is contrary to that shown in Figure 5-1. Which is correct?

Section 22.0 -- It is noted that the study only accesses the potential effects of development near the Tysons Corner and Mid-Corridor areas. Apparently no development is forecast near the Falls Church Metro Stations. This needs to be verified with the City.

Section 22.2 -- It is noted that "... the increase in traffic attributable to the rail development-related forecasts represent area-wide impacts." It is curious whether these area-wide impacts reach to Falls Church Metro Station areas.

Section 22.2 -- The final paragraph of the report states that development will result in increased ridership and also attract additional traffic to adjacent roadways. Does this apply to roadways near the Falls Church Metro Stations? This needs to be clarified. (0122, 0122-A -31)

Response: *The Project Team addressed and verified these comments (which were made on the January and March 2002 draft versions of the Traffic Analysis and Station Access Technical Report). The Project Team also initiated meetings with the City of Falls Church to discuss these issues.*

Section 6.1. The links included in Table 6-1 were a sample of the important highway links in the project area. The table was not meant to be comprehensive of all heavily traveled links in the corridor. The links included in the table were selected based on their proximity to the BRT and Metrorail alignments, and were adjusted to be links most affected by implementation of the Build Alternatives.

Section 7.1. The general comment in Section 7.1 regarding limited impacts was based on two different sources. With regard to East Falls Church, the comment was based on the fact that there will be no change in parking capacity at the East Falls Church Station as a result of the project, and thus there will be no change in the primary generator of auto trips to and from the station. There would be changes in traffic levels because of general population and employment growth, but these changes would not be the result of project implementation. With regard to the West Falls Church Station, the comment was based on traffic analysis contained in Chapter 8 of the Traffic Analysis and Station Access Technical Report (June 2002). The data in Chapter 8 showed very marginal changes in traffic volumes as well as very marginal changes in intersection levels of service (in some instances intersection delays actually improve slightly). Section 7.1. The most predominant generator of auto traffic to and from the East Falls Church Station is the park-and-ride facility. No changes to the capacity of the lot are planned as part of the Metrorail Extension. Furthermore, the facility typically fills up by 8 a.m. Therefore the major generator of auto trips to the station essentially would not generate trips after 8 a.m., regardless of the change in service frequencies.

Section 8.2. Changes to the station and associated facilities resulting from implementation of the project were incorporated in the analysis. Other changes to the station must be part of the region's Constrained Long Range Plan in order to be included in the analysis. The new park-and-ride structure for West Falls Church is included in the No-Build Alternative but has not been considered a project impact.

Table 8.1. These data were checked and verified; the data in the table was correct.

Section 8.3.1. Comment noted. BRT was eliminated from further consideration after the public and agency review and comment on the Draft EIS.

Section 8.3.1. Parking demand at each station under the two Build Alternatives is contained in the Patronage Forecast Report in support of the Final EIS. As an example, parking demand at

West Falls Church under the No-Build Alternative is estimated to be 1,950 spaces. Under the LPA demand would be approximately 2,000 spaces.

Section 8.3.2. The Great Falls Street/Haycock Road intersection is included in the Final EIS analysis.

Section 8.3.2. The traffic analysis contained in the Final EIS is based on 2025 traffic levels. Both the a.m. and p.m. peak hours were analyzed for all relevant intersections for the design year 2025.

Section 8.5. Responses to prior comments have shown the adequacy of the traffic analysis completed for West Falls Church. Therefore the decision to not undertake bicycle and pedestrian access analysis was reasonable.

Section 8.6. The determination that mitigation is not required is based on the fact that the intersection will fail in 2025 regardless of whether the project is built. Mitigation to improve intersection performance would require improvements to address not only the incremental delay resulting from project implementation but also the delay and deteriorated intersection performance resulting from general population and employment growth. Improvements to address growth are not the responsibility of the project.

Figure 8.1. Figure 5.1 in the Traffic Analysis and Station Access Technical Report (June 2002) represented current traffic flows and volumes while Figure 8.1 represented flows and volumes for 2025. The differences between the two figures represented changes in the location of population and employment concentrations in the station area and the region as well as changes in roadway operations (which impact on travel path choice) in the station area and the region.

Section 22.0. The analysis outlined in Chapter 22 of the Traffic Analysis and Station Access Technical Report (June 2002) was completed specifically to understand the impacts of the transit-oriented density bonuses allowed for Tysons Corner and Reston because these are the locations where the density bonuses are allowed.

Section 22.2. Some impacts from additional traffic generated by density bonuses in Tysons Corner may be expected in Falls Church, though they will be much less than the impacts in Tysons Corner. This is because trips generated in Tysons Corner will have dispersed origins and therefore will take multiple travel paths. As a result, only a small percentage of the trips generated in Tysons Corner will travel through West Falls Church. Impacts from overall population and employment growth will be much more significant.

Section 22.2. See comment above.

Concerns About Traffic Impacts at East and West Falls Church Stations

Local Comment: The draft EIS did address one critical area of concern to the City [of Falls Church] -- Traffic Analysis and Station Access for the West Falls Church Metro area. While it generally addresses some concerns, we believe it falls short in its analysis. Please let me reiterate the City's critical concerns as related to this Technical Report:- Traffic- The traffic generated by this project will greatly diminish the quality of life of our residents. We asked that the City's [Falls Church] traffic consultant review and analyze the EIS. His comments are attached (Attachment 5). It is of great concern that nineteen (19) separate technical issues were identified as needing to be rectified or clarified. Our consultant states that these "shortcomings, inconsistencies, and concerns/questions are found to be rather troublesome. (0122, 0122-A -13)

Response: *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

The Project Team has reviewed the comments from the traffic consultant for the City of Falls Church and addressed his comments above. Overall, the consultant found the Technical Report was “comprehensive and well done – mostly within the standard methodologies and criteria.”

Traffic at East and West Falls Church Stations

Local Comment: It is our understanding that the Dulles Corridor Project is a phased regional rapid transit project with planned station facility improvements within the East and West Falls Church Metro Station areas. Given this understanding, we firmly believe that this project will have a substantial vehicular traffic impact on the City as the East and West Falls Church Metro Stations transform into a major regional transportation/transit hub in the future. From the outset, the City has been concerned that the Project will bring thousands of additional motorists into the City, and urged that plans must be made to accommodate the additional traffic. (0122, 0122-A –8)

Local Comment: We firmly believe this project will have a substantial vehicular traffic impact on the city as the East and West Falls Church metro stations transform into a major regional transportation hub in the future. From the outset the city has been concerned that the project will bring thousands of additional motorists into the city, and urges that plans be made to accommodate the additional traffic. If these motorists drive to stations and cannot find parking, they will try to park on the residential streets, creating a significant impact on the surrounding neighborhoods. The city has repeatedly requested that these impacts and others be anticipated and addressed. 0122, 0164-T –8)

Local Comment: It is our view that the traffic impacts [in Falls Church] were not fully analyzed in four key areas: Assumptions - We believe the assumption that ridership will not increase and the assumption that failing intersections should not be improved is fundamentally flawed. Every projection throughout the EIS shows thousands of anticipated new riders. One of the project's major goals is to increase ridership and, certainly, at the starting point for the service, additional persons will be traveling to this destination. (0122, 0122-A –14)

Response: *The Project Team used the Northern Virginia Major Investment Study Model (NVMISM) to forecast the regional travel demand in the Dulles Corridor. This model was refined for use during the Dulles Corridor Rapid Transit Project, but had been last used for the Metrorail I-66 to Centreville MIS. NVMISM was developed using the general guidelines of the Metropolitan Washington Council of Governments (MWCOC) for a major update of the region's travel demand forecasting procedures, and has been considered to be a state-of-the-art model. Inputs into the model include an analysis on regional travel markets, which included private automobile use, public transit, public taxis, and walking/bicycle trips. The model also included demographic and land use data from MWCOC's Round 6.3 Cooperative Land Use Forecasts. By taking all of these items into consideration, through the use of the model, the Project Team has been able to project the ridership for each Metrorail station in the corridor. While the model outputs show that ridership at some stations will be higher than others, these forecasts are based on empirical data, and therefore portray the most accurate account of what will be happening in the corridor over the next 25 years.*

Implementation of the Project would result in increased off-peak Metrorail service at the East Falls Church Station. However, operating plans for the Wiehle Avenue Extension and Full LPA assume no additional feeder bus service, nor any new park-and-ride capacity for the off-peak period for this station. Because the station's existing park-and-ride facilities are typically full by 8:00 AM on most weekdays and parking is controlled on local streets, it is not anticipated that increased off-peak Metrorail service would generate additional traffic in and around the East Falls Church Metrorail Station. Based on the analysis of the forecast ridership volumes for the East and West Falls Church Metrorail Stations, the Project Team does not feel that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in early 2005. This new facility is part of the analysis in support of the Final EIS. The Project Team

did initiate meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.

Public Comments

Traffic Impacts of Median Alignment

Public Comment: Is the proposed median alignment likely to reduce or increase automobile traffic? (0151, 0297-E -7)

Response: *Because of forecast increases in population and employment growth, traffic will consistently increase throughout the region over the next 20 years. However, as the Final EIS indicates, traffic on many of the regional highways, will not be increasing as a result of the Dulles Corridor Rapid Transit Project although there could be slight increases in localized traffic at intersections directly adjacent to some of the stations. This Project is intended to provide an alternative mode of travel in the corridor to alleviate the effects of increased congestion.*

Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.

Route 123/International Intersection

Public Comment: I don't even want to think about the mess that would be created if the intersection of 123 and International were to be disrupted. (0054, 0054-CC-1)

Response: *Construction impacts on roadways as a result of the project are discussed in Chapter 6 of the Final EIS. Proposed roadway mitigation measures for the two Build Alternatives are also detailed in the Final EIS.*

Capture Traffic Further West

Public Comment: There are link studies contained within the DEIS that indicate in the year 2025, the Dulles Greenway will have a LOS of F. To mitigate this congestion, sound traffic planning principles would dictate the necessity to capture as much of the planned residential traffic as far west on the Greenway as possible (i.e., the Route 772 station). (0003, 0003-L -3)

Public Comment: The traffic analysis contained within the draft environmental impact statement indicates failing levels of service at the 606-789 intersection. To mitigate this congestion, sound traffic planning principles would dictate the necessity to capture as much of the planned traffic as far west on the greenway as possible, or the Route 772 station. (0003, 0246-T -4)

Response: *As initially evaluated in the Supplemental Draft EIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces. Intersection LOS in the vicinity of the Route 606 station in 2025 will be F in both the No-Build Alternative and the Full LPA. The Project has proposed roadway improvements as mitigation measures.*

Traffic Signal Placement

Public Comment: Will traffic control signals be placed on dangerous intersections that are currently uncontrolled, such as Idylwood Road and Redd Road at the WFC S&I entrance? (0424, 0424-E -5)

Response: *It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing traffic or intersection issues. Although additional storage tracks will be constructed at the West Falls Church Yard impacts to traffic will be negligible. Therefore, the Project Team does not anticipate any Project-related traffic impacts at this intersection.*

Concern About Traffic Impacts Near West Falls Church Station

Public Comment: The second issue is the effect of increased traffic on our streets. This includes safety impacts, congestion impacts, parking impacts, and air quality impacts. As it pertains to the primary streets directly surrounding our development (Haycock Road, and the Metro Service Road), these have not been addressed in the EIS because our property was simply not considered significant, in spite of our critical location. The report is similarly deficient in laying out what will be done to mitigate congestion and secondary effects from nearby and highly important intersections, such as Haycock-Great Falls and Haycock-Route 7, which we routinely use and which directly affect our local travel. (0126, 0126-E -5)

Public Comment: In speaking with the consulting representatives at the public meetings, and we don't find anything to the contrary in the EIS, the popular response to these fears is that the net effect is that there will be no traffic increases around West Falls Church; i.e., the motorists who now drive to and park at West Falls Church station are from communities along the proposed line, and when the project is built, those motorists will no longer drive here or will park at their new Metro parking lots. This may indeed happen, but to suggest that there will be decreases in traffic at West Falls Church is ludicrous. It flies in the face of the very justification used for the Dulles Corridor project; i.e., that traffic will continue to increase dramatically in the next 10-20 years. As they say in the movies, "If you build it, they will come", if for nothing more than to use West Falls Church as a parking and debarkation point to get to East Falls Church and then double back on Metro to Dulles or wherever. (0126, 0126-E -6)

Public Comment: I mentioned our concerns about traffic. We feel that your study methodology was flawed because of the limited areas you study. We anticipate widespread effects in the entire area surrounding the transit station and we feel your report does not adequately address the potential impacts on our neighborhood roads. (0145, 0145-T -10)

Response: *The three intersections included in the traffic analysis for the Orange Line Connection segment of the project corridor were selected based on their location relative to the West Falls Church Metrorail Station. These three major intersections are directly adjacent to the station and would therefore experience the greatest impact, if any, from the project. Based on the results of the analysis, it can be reasonably inferred that the intersections adjacent to the three analyzed in the Final EIS would also experience the same impact since they are located in close proximity to the analyzed intersections.*

Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.

Mitigation measures were proposed for those intersections that would have unacceptable levels of service (LOS E or F) and delay times five or more seconds or five percent greater than those experienced for the No-Build Alternative. Based on the analysis, mitigation would not be warranted at Route 7/Haycock Road, Great Falls Street/Haycock Road or at the Haycock Road/Park-and-Ride entrance under the two Build Alternatives. At these locations, levels of service and delay times are improved or only slightly more than those for the No-Build Alternative.

Traffic Impact at Wiehle Avenue Station

Public Comment: The station on Wiehle is going to impact Inlet Cluster, Inlet Court, because there is a curve approaching that intersection. There is no traffic light. The speed limit is 20 or 25 miles an hour. No one adheres to it. The speed limit on the rest of Wiehle is 35. Most of the traffic goes at 50. We have had, over the 31 years of the Cluster, deaths on that intersection. They do not show up because they have been over time. (0288, 0288-T –1)

Response: *While traffic volumes are expected to increase at the intersections directly adjacent to the Wiehle Avenue Station, the increases will be due largely to the forecast population and employment growth forecast for this area, as indicated in Chapter 6 the Final EIS. The Wiehle Avenue/Inlet Court intersection was not analyzed for this study because it is located approximately one mile from the proposed station location; therefore, Project-related effects at this location would be minimal.*

Impacts To Route 7 Service Roads

Public Comment: The proposed location of the garage also could alter the circulation pattern in the area, potentially eliminating or restricting use of the service road along westbound Route 7, which, as noted on page 2 above, is the singular access point to the TMS property. Section 14.1 of the Traffic Technical Report indicates that the Virginia Department of Transportation intends to widen westbound Route 7 between Westpark Drive and the DAAR from its current three (3) lanes to four (4) lanes. Drawing GPN-C-213 (Page 272) of the DEIS exhibits appears to incorporate these improvement with the design of the parking structure. Indeed, the service road appears to shift to the east while eliminating three (3) existing curb cuts from westbound Route 7, including the entrance that serves the Toyota Property and the TMS Property. Although the DEIS and Traffic Technical Report do not explicitly acknowledge the effect this widening will have on the Route 7 service road, we have been told the planned widening could modify the operation of the service road on westbound Route 7 to a "one-way" only road. Were this widening and change in traffic to occur, patron of Koons Toyota, Tysons Self Storage and the TMS Property no longer would have clear ingress/egress to their properties. As noted above, the service road is the only means to and from the private access easements benefiting the Property. This effect appears not to have been considered as part of the DEIS. (0135, 0391-L –16)

Public Comment: How does the DEIS envision the functioning of the westbound Route 7 service road in the event the parking garage at the Tysons West station is constructed? (0135, 0391-L –23)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Therefore, the Project is no longer affecting the TMS Property nor Tysons Self-Storage.*

The park-and-ride at Tysons West Station has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts. The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known.

Construction Impacts to Tysons Corner Businesses

Public Comment: The other Host Marriott hotel will be negatively affected by the rail project is the Ritz-Carlton, Tysons Corner. Our concern is not only for this hotel but also the economic impact on the neighborhood, as people avoid the construction and traffic congestion at Tysons Boulevard and Route 123 where the Tysons Central Station is to be developed. Part of the success of our business is dependent upon providing customers an easily accessible location and we anticipate that the construction of this station will likely cause us to lose customers, given that it will interfere with the hotel's primary access along Tysons Boulevard. We acknowledge that the issue is not unique to us and that the retail

elements of the neighborhood will likely be impacted as well. As such, we suggest that appropriate efforts be made to ensure that the construction of this station be planned and phased in a manner that minimizes traffic detours and congestion along an already crowded Route 123 and Tysons Boulevard intersection. (0453, 0453-L -3)

Response: *During the preliminary engineering and final design, maintenance of traffic plans will be developed to minimize any impacts to local area roadways, including the intersection of Tysons Boulevard and Route 123. Access to the hotel will be maintained along Tysons Boulevard so minimal long-term economic impact is anticipated for either the hotel or other retail facilities. In general, the mobility benefits of providing a transit station in close proximity to retail facilities and hotels outweigh any adverse traffic effects.*

Traffic Impacts During Construction

Public Comment: What are the impacts on corridor traffic during the construction phase of any of the alternatives? (0235, 0235-E -7)

Response: *As discussed in Chapter 6 of the Final EIS the construction of the Metrorail Extension would require intermittent lane closures on some local roads through Tysons Corner and Dulles Airport, as well as on regional facilities such as the DIAAH, Dulles Toll Road, and Dulles Greenway. As stated in Chapter 6, of the Final EIS, maintenance of traffic plans would be developed for all construction activities that would impact regional and local roadways. To the extent possible, all construction requiring lane closures would be done at night, on weekends, or in the off-peak period.*

Noise and Traffic Generated During Construction

Public Comment: Will the noise and traffic generated by construction and construction vehicles be restricted in hours of operation and noise and light levels? (0424, 0424-E -4)

Response: *Implementation of the Metrorail Extension would result in some disruptions to the operation of the transit and highway facilities in the corridor, as well some short-term noise impacts. Maintenance of traffic plans would be developed for all construction activities that would impact roadways. To the extent possible, all construction requiring lane closures would be done at night, on weekends, or in the off-peak period. Also, construction traffic would be re-routed, to the extent possible, along roadways in order to minimize noise impacts to nearby sensitive receptors.*

Specific Mitigation Needed for Roads Adjacent to Stations

Public Comment: What is the impact on both the region and individual communities in regards to shift in traffic, overflow parking, and increased traffic on feeder roads? Be more specific in identifying mitigation measures and the cost/funding sources for these measures. (0147, 0459-L -14)

Public Comment: The DEIS further states there will be deterioration around intersections in the vicinity of the Wiehle Avenue station and the Reston Parkway Station. Mitigation proposals include widening streets, build more turning lanes and build more ramps. The project team failed to adhere to the principles of cumulative effects analysis. Therefore, the analysis of the cost of the recommended mitigation measures should be factored into the equation and this analysis should be made available in the DEIS. Conceptual cost estimates should be prepared for the construction and implementations of the mitigation measures. Identification of funding sources should be determined. (0147, 0459-L -22)

Public Comment: Historically, transit rail systems do not reduce traffic congestion. In the modern American areas, traffic analysis reveals that increasing residential and commercial densities is largely incompatible with reducing traffic congestion. Citizens living around the transit stations have major concerns that the proposed rail strategies will have virtually no impact on the traffic congestion along the

Dulles Corridor. In addition, they are concerned that the excessive cost of the rail option could deny putting in place the mitigation measures proposed in the DEIS. (0147, 0459-L –26)

Response: *Over the next twenty years, congestion in the Dulles Corridor and the region will be increasing due to the increases in forecast population and employment growth. The Dulles Corridor Rapid Transit Project would provide an alternative mode of transportation within the region. While it is stated in the Final EIS that the project most likely would not solve the current congestion problems on the Dulles Toll Road and other regional roadways, the project would increase the transit capacity of the region as a whole. As outlined in Chapter 6 Final EIS, the Metrorail Alternative would substantially increase the transit capacity of the corridor (i.e., the number of travelers that can be comfortably accommodated in the corridor during peak travel times), relative to the No-Build Alternative. In general, every “new rider” generated by this project would result in one less automobile on the Dulles Toll Road or other regional roadways. As Table 6.2-1 in the Final EIS shows, the 2025 traffic volumes on some of the regional highways with the Metrorail Extension would be comparable to the 2025 No-Build Alternative volumes, with the majority of the link volumes only slightly decreasing for the Build Alternatives. Only volumes on the DIAAH would decrease enough to result in an improved level of service.*

Near the stations, there will be increases in localized traffic to and from the stations. The increases in localized traffic would largely be driven by the amount of park-and-ride and Kiss & Ride traffic programmed for a particular station area. Chapter 6 of the Final EIS includes a discussion of the localized traffic effects and proposed mitigation measures.

Clarification Regarding LOS Improvements

Public Comment: You show several intersections at levels of service (LOS) of D, E, and F in 2025 and then you show improvements leading to better LOS rating (C,D). But these improvements are not due to transit alternatives, but widening the roads and intersections, no? (0112, 0382-L –22)

Response: *The input to the travel demand forecast model includes the planned future roadway network. Therefore, the intersection levels of service for the No-Build and two Build Alternatives of the Final EIS reflect the roadway improvements of the year of forecast.*

The Project Team agrees that the Dulles Corridor Rapid Transit Project would not resolve traffic gridlock; however, it would provide an alternative to driving the automobile, which in turn would help to improve air quality in the corridor. For the purposes of this project, mitigation measures were proposed for those intersections that would have unacceptable levels of service (LOS E or F) and delay times five or more seconds or five percent greater than those experienced for the No-Build Alternative. In some cases, the failing levels of service at intersections could not be resolved by retiming or adding a traffic signal, therefore, turning lanes or extra travel lanes may be needed.

Traffic Calming Devices

Public Comment: Traffic mitigation features, such as speed bumps, additional stop signs, signs prohibiting cut-through traffic, and increased enforcement. These should be based on the anticipated future volume of traffic and should be put into place before the new rail facility is opened [Westhampton]. (0386, 0386-E –11) (0398, 0398-L –11) (0399, 0399-L –11) (0403, 0403-L –10) (0412, 0412-L –11) (0415, 0415-L –11)(0416, 0416-L –11) (0430, 0430-E –11) (0431, 0431-E –11) (0465, 0465-L –11) (0470, 0470-L –11) (0473, 0473-L –11)(0474, 0474-L –11)

Response: *It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing roadway and traffic issues, such as cut-through traffic in the Westhampton neighborhood. Since the project would not be increasing vehicle traffic within the station area, speed bumps an/or additional signage would not be warranted by this Project.*

Improvements to Haycock Road

Public Comment: Improvements on Haycock road, such as adding a lane to accommodate traffic turning at the Great Falls intersection and synchronizing traffic lights to alleviate congestion. (0386, 0386-E -12) (0398, 0398-L -12)(0399, 0399-L -12)(0403, 0403-L -11)(0412, 0412-L -12)(0415, 0415-L -12)(0416, 0416-L -12)(0430, 0430-E -12)(0431, 0431-E -12)(0465, 0465-L -12)(0470, 0470-L -12)(0473, 0473-L -12)(0474, 0474-L -12)

Response: *Based on the analysis provided in Chapter 6 of the Final EIS mitigation would not be warranted at the Haycock Road/Great Falls Street intersection for two Build Alternatives. Since this intersection fails under the No-Build Alternative, mitigation was not recommended for the Build Alternatives, although the Project Team did coordinate with the City of Falls Church on this issue. For the traffic analysis, the Project Team used the Synchro software package, which optimizes consecutive traffic signals as a unit so that they all run on the same cycle. The traffic signals that were optimized/synchronized for the traffic analysis include the Great Falls Street/Haycock Road, Haycock Road/West Falls Church Metrorail Station entrance, and Haycock Road/Route 7 intersections.*

Public Comment: With respect to air pollution, the increase in bus traffic to the WFC station and the increase in automobile traffic to the new WFC multi-level parking garage will bring additional vehicular pollution in and around the WFC Metro Station which is only one-half mile from the Westhampton neighborhood. We believe that mitigation measures to improve the traffic flow on Haycock Avenue are necessary to prevent a worsening of current rush hour traffic jams in the area and a significant increase in air pollution from idling engines as people attempt to negotiate the Haycock bottleneck at Turner St. We request that the plans for the Dulles Corridor rail system include mitigation measures for peak travel flow on Haycock Road. This should include all feasible mitigation, including synchronization of traffic lights and widening Haycock Road. (0388, 0388- L-2)

Public Comment: What you do say in the EIS is that one of our neighborhood intersections, Haycock Road and Great Falls Street, will degrade to an F level of service during morning and evening hours. What I couldn't find was any suggestion of what might be done about this impact. Nor did it appear to me that you had appropriately assessed the traffic that will result in the West Falls Church area from the expansion of service. (0145, 0145-T -11)

Public Comment: The EIS does not appear to consider full impact to the Haycock Road and Great Falls Street that will degrade to an F service of level during morning and evening peak hours. There appears to be no suggestion of remedies to correct this situation, only that this project will exacerbate a poor situation. (0179, 0179-T -8)

Response: *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

Based on the analysis provided in Chapter 6 of the Final EIS mitigation would not be warranted at the Haycock Road/Great Falls Street intersection for the two Build Alternatives. Since this intersection fails under the No-Build Alternative, mitigation was not recommended.

Cut Through Traffic Near West Falls Church Station

Public Comment: Also, we currently suffer from "cut-through" traffic on our narrow streets, which have no curbs, no gutters, and no sidewalks. That situation will only get worse as traffic increases into the West Falls Church metro with the addition of a 2,000 car parking garage. (0403, 0404- L- 2)

Public Comment: In addition, the traffic congestion on Haycock Rd. has already produced cut-through traffic in the Westhampton Neighborhood, as cars attempt to avoid the light at Haycock Road and Great Falls St. This is a danger to residents of the Westhampton neighborhood. We believe that the mitigation strategies in the plans for the Dulles Corridor Project should include measures such as speed bumps on Grayson Place and signs forbidding cut-through traffic in the Westhampton neighborhood. This should be coupled with increased traffic enforcement by Fairfax County. Such measures would help reduce mobile source air pollution impacts on the health of residents in the neighborhood and improve compliance with the provisions of the federal Clean Air Act. (0388, 0388- L-3)

Response: *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in project-related cut-through traffic in the neighborhoods around West Falls Church Station.*

It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing roadway/traffic issues, such as cut-through traffic on Grayson Place. Since the project would not be increasing vehicle traffic within the station area, speed bumps an/or additional signage would not be required as mitigation measures of this Project.

Public Safety Impacts

Public Comment: I am unconvinced about the effectiveness of existing plans for abating noise, traffic congestion, automobile pollution and visual pollution that will impact my neighborhood. I am especially concerned about public safety, as increased traffic will lead to a greater likelihood of auto accidents near my home. It will also increase the presence of non-residents in the neighborhood, which will reduce privacy and could increase crime. (0425, 0425-E -2)

Response: *Project related impacts to neighborhoods around West Falls Church Station are considered minimal and do not warrant mitigation.*

Traffic Impacts Near the Rotonda

Public Comment: The projected traffic levels of service (LOS) in the vicinity of the Rotonda (International Drive and Westpark Drive or Greensboro Drive) remain at E or F for all Metrorail alternatives; thus T4 is of no real benefit with regard to traffic congestion in this area. (0429, 0429-E -3)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and agency review and comment on the Draft EIS. The Project Team agrees that the Dulles Corridor Rapid Transit Project would not resolve traffic gridlock; however, it would provide an alternative to driving the automobile. The traffic analysis in support of the Final EIS shows that traffic impacts resulting from the Build alternatives are minimal because substantial park-and-ride capacity is not provided at the four Tysons Corner stations.*

Westpark/Greensboro Drive Improvements

Public Comment: The suggested lane configurations at Westpark Drive and Greensboro Drive are very good--I only wish they could be implemented today, without Metrorail! (0429, 0429-E -7)

Response: *The construction of the proposed interchanges along the Route 7 and Route 123 are not part of the Project and are not yet part of the region's Constrained Long Range Plan.*

Congestion Reduction

Public Comment: Many of us want to believe that rail will resolve gridlock, and improve our air quality. One consistent finding was that a rail system does not reduce traffic congestion, and I guess I really didn't have to spend a lot of time going through these documents and to other resources, because all we need to do is to drive along Route 66 or I-27 and we can see congestion. (0147, 0147-T –1)

Public Comment: How long will it be before the congestion would be excessive again? The Vienna metro station was proposed as a means of reducing congestion, but we have congestion again. (0166, 0166-T –4)

Public Comment: Rail will just attract its own compensating recongestion. It's clear the idea is for rail to carry more people. Voila. No wonder the study said it didn't expect rail to reduce congestion. (0155, 0155-T –4)

Response: *The Project Team agrees that the Dulles Corridor Rapid Transit Project would not resolve traffic gridlock; however, it would provide an alternative to driving the automobile, which in turn would help to improve air quality in the corridor. As outlined in Chapter 6 of the Final EIS, the Metrorail Alternative would substantially increase the transit capacity of the corridor (i.e., the number of travelers that can be comfortably accommodated in the corridor during peak travel times), relative to the No-Build Alternative. In theory, every “new rider” generated by this project would result in one less automobile on the Dulles Toll Road or other regional roadways.*

Public Comment: Rail transit's inability to reduce congestion is generally attributed to several factors: Rail transit's share of total trips is too small to even have a significant impact on automobile use. The average transit usage by commuters in the United States is between 2 and 3 percent. (0147, 0147-T –2)

Response: *Chapter 6 of the Final EIS outlines mode share by sections of the Dulles Corridor (Tysons Corner, Reston, Herndon/Dulles, and Loudoun East). In Tysons Corner, the highest Metrorail mode share will be approximately 34 percent; In Reston the highest Metrorail mode share will be approximately 17 percent; in Herndon it will be approximately 16 percent; and in Loudoun East it will be approximately 11 percent*

Public Comment: We are also concerned about the adequacy of the recommended mitigation measures that we suggest should result at least in no more congestion than no-build alternative. (0233, 0426-M –8)

Response: *Mitigation measures were proposed for those intersections that would have unacceptable levels of service (LOS E or F) and delay times five or more seconds or five percent greater than those experienced for the No-Build Alternative [confirm]. These mitigation measures would reduce delay at most intersections to the levels forecast for the baseline condition.*

Internal Circulation Issues in Reston and Tysons Corner

Public Comment: Both Tysons Corner and Reston have serious internal circulation issues that, if properly dealt with in conjunction with the proposed rapid transit, could become models for an integrated transportation system. Both of these areas need the ability of its commercial and residential populations to move in and around their respective areas with greater facility and flexibility. (0148, 0148-T –3)

Response: *With the Metrorail Extension, feeder bus service would be provided from all of the proposed Metrorail stations in Tysons Corner and Reston. The majority of these stations would be constructed to include feeder bus bays onsite; however, for Tysons Central 123 and Tysons Central 7 Stations, feeder bus bays will be located on-street. Please see the Transit Operations and Maintenance Plan for a more detailed discussion of future feeder bus service in the corridor. In addition, the increased densities that are allowed in the Tysons Corner and Reston station*

areas will promote better accessibility and circulation on the ground level. The compact development will encourage walk and bike access to and from the stations.

Density of Development and Traffic Impacts

Public Comment: While it is true that BRT/rail will take some of the current cars off the roads, one of the previous studies pointed out that only 1 in 10 of any new workers to the area will actually ride rail. Roads in these areas are already at or near a grade of F. Adding all of the cars resulting from the increased density will only exacerbate the situation. (0203, 0203-L-3)

Public Comment: Specifically, what is the number of automobiles that will be added to the present streets within at least two miles surrounding these stations as the results of - Operation of the rail WITHOUT is added density provided under the most recent changes in the Fairfax County Comprehensive Plan. What type of highway construction (i.e. lane-miles) is needed handle this increased traffic and maintain a C level of service? Operation of the rail WITH the added density (commercial and residential) provided under the most recent changes in the Fairfax County Comprehensive Plan. What type of highway construction (i.e., lane-miles) is needed handle this increased traffic and maintain a C level of service. (0454, 0454-E-4)

Response: *Table 6.1-5 in Chapter 6 of the Final EIS shows the anticipated mode shares in different portions of the Dulles Corridor for the two Build Alternatives. While the table shows that Build Alternatives experiences an increase in mode share relative to the No-Build the data in the table also shows that the majority of Home-Based Work Trips will not be made by transit.*

The increase in demand associated with density bonuses will result in localized traffic congestion in the transit station areas. As stated, the counties' development permitting process would mitigate the impacts due to increased densities within the corridor. Fairfax County has adopted non-degradation policies that will limit development that would result in traffic congestion, thus reducing the level of development and limiting any negative impacts on property values due to congestion. In addition, an evaluation of property values along other transit corridors in the Washington metropolitan area does not indicate any decrease in property values, even in areas experiencing congested conditions. Actual implementation of transit-oriented development and the timing and increase in densities is under the jurisdiction of the local government in the area, so any mitigation needed to support the increase in densities is also under the jurisdiction of local governments, and they have included such measures in their land use regulations.

Additional Traffic Analysis Needed

Public Comment: Please be assured that we are not against designing a transit project that will release gridlock. We just don't believe that the analysis before us today is complete. I believe that the EIS has not adequately studied the importance or the impact of the increased traffic volume on the neighborhood streets. So, therefore, it is my recommendation that the EIS study analysis go out beyond the intersections. (0147, 0177-T-6)

Response: *The intersections included in the traffic analysis for the Project were selected based on their location to the planned station facilities at Wiehle Avenue, Reston Parkway, and Herndon-Monroe. At least five, but sometimes seven, major intersections were analyzed. These intersections were selected based on their location to the station, observed traffic circulation patterns, and because they would be most likely to experience the greatest project-related impact. Based on the results of the analysis, it can be inferred that the intersections adjacent to those under study would also receive the same impact since they are located in close proximity to each other. In addition, those intersections that are located further away from the proposed stations would be less likely to experience any project-related impacts. Because some of the intersections in the vicinity of stations would operate at unacceptable levels of service in 2025 with this Project, mitigation measures have been proposed as documented in the Final EIS.*

Prefer Metrorail Service

Public Comment: We support continued efforts to complete the project, and we prefer that it be a rail only project from the start. It is clear that rail will attract the greatest number of people from their cars, and that should be the overriding criteria, to reduce vehicle miles traveled. In fact, we do not see that sort of analysis in the report and it should be included. Doing so will demonstrate the value of the project to the region. BRT does not serve Tyson's corner, and this is an area that is most in need of transportation alternatives in the immediate short term - BRT won't relieve heavy traffic congestion in Tyson's. (0158, 0475-L –1)

Public Comment: In fact, we do not see that sort of analysis [VMT] in the report, and it should be included. Doing so will demonstrate the value of the project to the region. (0158, 0158-T –2)

Response: *Vehicle Miles Traveled (under the No-Build, BRT, and Metrorail alternatives) were contained in Appendix II of the Travel Demand Forecasting Methodology and Results in support of the Draft EIS. The data in the appendix showed that there is a decrease in regional VMT under the BRT and Metrorail Alternatives, compared to the No-Build Alternative. This pattern would continue based on analysis conducted in support of the Final EIS.*

Concern About Assumptions for Traffic Analysis

Public Comment: Another problem is how WMATA and VDRPT invented traffic analysis zones instead of using zones entirely provided by Fairfax County. There were no such zones for Loudoun. Another falsity that led to inflated ridership estimates is the assumed speeds of Metro trains and buses. (0112, 0462-L –4)

Response: *The traffic analysis zones used in the travel demand forecasts for the Final EIS are taken from the Metropolitan Washington Council of Governments' Transportation Analysis Zones (TAZ) structure that is part of the COG's regional travel forecasting model set. By federal regulation, this TAZ structure must be used to ensure an accurate comparison of transportation projects. The Project Team and Fairfax County worked together to split large zones in Tysons Corner and more accurately distribute population and employment among the smaller zones. However, the smaller zones remained within the overall boundaries of the larger zone and the overall population and employment data for the larger zone did not change, but rather was simply distributed among the smaller TAZs.*

The speeds for both Metrorail and BRT were developed using a detailed simulation package that took into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations. The inputs into the model reflected WMATA experience from existing operations and WMATA vehicle characteristics.

Consideration of HOV Restrictions and I-66 and Dulles Connector

Public Comment: Page 6-3, Table 6.1-2: Peak Hour Volumes and LOS on Selected Highway Links, 2000 to 2025 for Baseline Alternative appear to fail to take into account peak-direction HOV restrictions on I-66 between the Dulles Connector and Route 29 (assume this is Interchange 69 north of Falls Church), and on the Dulles Connector itself, since LOS-F is predicted, something contrary to generally-accepted HOV operating policy. (0112, 0462-L –40)

Response: *A separate analysis was conducted for the HOV facilities on the Dulles Toll Road and the future I-495 HOV lanes because these are separated from the regular travel lanes, and would therefore be counted as separate volumes. For I-66, since it is a restricted facility during the peak period, there would not be separate volumes for HOV lanes vs. regular travel lanes; therefore, the HOV restrictions were accounted for in this table of the Draft EIS.*

Concerns About Model Version Used for Analysis

Public Comment: I saw your discussion on why you used the Northern Virginia Major Investment Study Model, but not COG Version 2. But why didn't you use the Version 1 model, which was used for the Corridor Cities Transitway study and other rail and highway studies? It's the official MPO model and is widely used for all transportation projects? (0112, 0382-L –10)

Public Comment: Which modeling techniques were employed to devise ridership estimates? Was the COG TPB Version 2 model used, or did WMATA use the Dulles Rail model or some other model? Please advise. (0112, 0112-E –4)

Public Comment: The modeling technique used to forecast ridership was the Northern Virginia Major Investment Study (NVMISM) model. This is also commonly called "the Dulles rail model," which in itself shows bias toward heavy rail over BRT. While the DEIS gives a detailed explanation why it used this methodology, believe that WMATA's reasons for using NVMISM do not provide acceptable rationale for deviating from the regionally approved travel demand forecasting model, known as Version 1 or 2 National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments (COG TPB for short). While MDOT and other DEIS endeavors have used COG's Version 1. Version 1 was not even considered for the Dulles project, though Version 2 was tested against NVMISM. WMATA and VDRPT must explain why Version 1 was not used, though that is the official technique of the COG TPB, which is the metropolitan planning organization (MPO) for the greater D.C. area. DEIS Technical report on methodology and forecasting (page 22) states: "NVMISM was developed initially for the 1994 Dulles Corridor Rail Study..." have been advised that NVMISM was invented by Parsons Brinkerhoff and was "refined" by Jeff Bruggeman of AECOM for the I-66 study. However, the main purpose of this model was for building a case for Dulles Rail - not BRT. It would appear that WMATA did more "refinements" with the Dulles model to build a case for rail. (0112, 0462-L –12)

Response: *The Project's ridership estimates were developed using the Northern Virginia Major Investment Study Model (NVMISM). This model was developed for the original Dulles Corridor Major Investment Study and was also utilized for the Metrorail I-66 to Centreville Major Investment Study. This model set was utilized instead of the COG Version 2 model because Version 2 had not yet been validated. A more detailed description of the selection of the model was outlined in Chapter 3 of the Travel Demand Forecasting Methodology and Results Technical Report (June 2002).*

The NVMISM model was not a replacement of the Version 1 Model but rather an adaptation and refinement of the model for more localized analysis. This approach was used because the Version 1 model is region wide and was meant to describe regional travel flows. The NVMISM model refined this model in terms of a more detailed highway and transit network, smaller transit analysis zones that more closely reflect the differences in land use, and the incorporation of BRT into the model. In addition, the Version 1, because it was a regional model, did not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for park-and-ride capacity and other station area improvements.

Credibility of Model Results

Public Comment: I understand the NVMISM model cannot be calibrated due to the "deep nesting" method it relies on to determine trip generation. Why did you use it then? (0112, 0382-L –11)

Public Comment: NVMISM was the same model that predicted 115,000 Dulles rail trips from the earlier Dulles Rail study. That number did not even pass the laugh test, though rail transit advocates have given it a life of its own! This number persists in being spread around the Internet on various Web sites, such as: http://www.libertynet.org/netis/ridership_comparison.htm. (0112, 0462-L –13)

Response: *The NVMISM model was used because the Project Team determined that it provided the best tool available at start of the environmental review process in year 2000. The MWCOC*

models at the time had poor transit modeling capabilities and could not be used to address many of the issues which were of importance to the study, including the trade-off between BRT and Metrorail, detailed station choice and alignment issues in Tysons, mode of access at suburban stations, and park-and-ride capacity restraint.

Bias Against BRT

Public Comment: The bias against BRT in using this model is noted on page 72 of the technical report, where you state: "NVMISM, as with most regional travel demand forecasting tools, was not originally equipped to deal with the mode of Bus Rapid Transit." You add that "it was clear that as scoped by project stakeholders, BRT could not be considered as an express bus system...rather was assumed that BRT was a hybrid system, which at last for travel demand analysis, should generate a demand somewhere between an express bus system and rail system." This statement shows an inherent bias and fundamental flaw with this DEIS. Indeed, most of the "stakeholders" during scoping were advocates of fixed rail over bus service. Examining the scoping reports, one would conclude that most of the "stakeholders" were environmental activists and proponents of high-density development. Few impacted communities were considered in terms of new density to attract rail ridership, nor commuters who would have to pay high tolls to fund fixed rail. It also is untrue that "most regional travel demand forecasting tools" cannot "deal" with BRT. (0112, 0462-L -14)

Public Comment: In addition, NVMISM has a bias against BRT because it factors in "potential traveler's perception of ride comfort, convenience, safety, security, the availability or lack of a seat, system image and reliability" (See page 72). These are all subjective and are not proper measures of effectiveness for a transportation study. (0112, 0462-L -17)

Response: *The travel demand forecast model was not biased against BRT. The referenced statement from the Draft EIS Technical Report indicated that the characteristics of BRT were not part of the existing model set because it had not been a mode that had been modeled in the Washington area, and therefore the characteristics of this new mode had to be incorporated into the model. The demand for, and perception of, different modes of service was based on experience with transit systems throughout the United States as well as a large number of attitudinal surveys of transit riders from all over the United States. This was what was referred to in the statement "it was assumed BRT was a hybrid system, which at least for travel demand analysis, should generate a demand somewhere between an express bus system and Metrorail system. The scoping process was a public process open to all members of the public and therefore was open to both advocates of Metrorail, BRT, and existing bus services. The statement that most regional travel demand forecasting tools could not deal with BRT meant simply that a mode with the unique characteristics of BRT had to be incorporated into the model set.*

Rider perception of different modes is an extremely important and common part of modeling mode choice. Countless attitudinal surveys have been completed that show that people prefer certain transit modes relative to others. The factors playing a role in this perception were outlined in the Travel Demand Forecasting and Methodology and Results Technical Report (June 2002). Use of these 'bias factors' is standard practice in demand forecasting.

Confidence Interval of Model Forecasts

Public Comment: What is the +/- (confidence interval) around these [NVMISM] forecasts? What's the uncertainty? (0112, 0382-L -12)

Response: *The development of a regional travel model does not lend itself to a statistical estimation of error terms. The model is developed to match base year information at the greatest level of detail possible. Thus, the forecasts are made so as to predict the "most likely" outcome and to be used to assess the differences between alternatives in order to make "better" choices from the available data.*

Use of 1990 Census Data

Public Comment: Another fault in your study is reliance on 1990 census data. You state in the same report on page 61 that the reason you used 1990 census data was because "data from MWCOG's most recent travel surveys (1994) were not available at the time the model was developed." However, the 1997 U.S. Census provided updated journey-to-work data and other information that should have been factored into your studies. Why this was not done remains a mystery, especially when you made "refinements" to the Dulles rail model while the EIS was being done. It also appears you used the COG Patronage Study (conducted for WMATA) to derive baseline numbers (See "Travel Demand Forecasting Methodology and Results - Appendix I). I believe the 1997 census data was available in 1999 and should have been used. (0112, 0462-L -15)

Response: *The 1990 data referenced was not census data but rather the MWCOG travel survey, which surveys travel preferences and origins/destinations for use as inputs into the regional model sets. With regard to the journey-to-work data, this is data that MWCOG must incorporate into its data sets. The Project Team did not have the resources to incorporate this data and thus relied on MWCOG. More current data was not available from MWCOG at the time the Draft EIS was prepared. The forecasts used for the Final EIS used 2000 Census data as an input.*

Use of Composite Impedance

Public Comment: Another major fault with model is reliance on "composite impedance" where you look at time and costs to go from Points A to B for every mode. This is probably why your travel times from station-to-station are extremely fast (see discussion of speeds). Understand that "composite impedance" is not used in other travel demand forecasting. (0112, 0462-L -16)

Response: *The concept of impedance is the foundation of modeling, and is used in both the trip distribution and mode choice steps of the modeling process. Composite impedance is simply the combination of two key factors in distribution and mode choice, travel time and cost. Travel time is an input into the composite impedance, and thus has nothing to do with the calculation of travel times. The station-to-station travel times utilized in the model were developed using a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations. Composite impedance is quite a common approach in travel forecasting for estimating trip distribution and mode choice.*

Traffic Analysis Zones Used

Public Comment: And, another problem are the fact your "traffic analysis zones," which appear to be a key ingredient in factoring ridership, were "recreated," as stated on page 61 of the "Methodology" technical report (See Exhibit 1). While you rely on Fairfax County subzones, you also state: "Since the number of subzones allocated to Fairfax County was less than the 62 additional zones required, zone numbers from ranges set aside for other Northern Virginia counties were used to make up the complete set. Zonal boundary files were recreated, zonal areas were calculated and various land use and related model inputs, such as densities, were updated for each year used in the analysis..."Again, this seems to be a potentially fatal flaw in your methodology because you are inventing TAZs to inflating land use densities in order to inflate ridership potential for rail, but not BRT. Plus, you state on page 380 of the "Traffic Analysis and Station Access Study" technical report, that you did not even have such TAZs for Loudoun County. Yet, you "assume" that "travel patterns in the county would still be affected by transit-related growth in Fairfax County." This could be a false assumption. (0112, 0462-L -18)

Response: *Transportation Analysis Zones (TAZs) were not recreated. The existing TAZs in Tyson Corner and Reston/Herndon are quite large. There is significant variation in land uses and employment and residential densities within Tysons Corner and Reston, and these same*

variations occur within the large TAZs in the area. The purpose of splitting zones was to allow for more detailed analysis and to more finely reflect land use and densities. An example of why this was done was that under the current TAZ structure, a single large TAZ might include large office concentrations along Route 7 in Tysons as well as low density uses such as an auto dealer. The result of all of these different uses in a large TAZ is that these uses are 'averaged' over the TAZ, thus providing an inaccurate description of what is really there as well as what the demand for travel to and from the TAZ really is. To allow for more detailed analysis, large TAZs were split so that the different uses would each be reflected. No changes to the original TAZ boundaries occurred. Instead existing TAZs were split. Further, no changes in the population and employment data in the TAZ was altered. Instead, the data was distributed among the split zones to more accurately reflect the land uses in the split zones. The Technical Report prepared in support of the Draft EIS stated that the MWCOC model has extra zone numbers that are not assigned to a current zone. This is because this sort of split zone analysis is a common technique when doing detailed sub-area analysis. The Technical Report simply states that these extra numbers were assigned to the new subzone structure for Tysons Corner and further states that some numbers from the extra numbers assigned to Loudoun County also had to be used.

The reference to the Traffic Analysis and Station Access Technical Report (June 2002) refers to the analysis of increased land use densities around transit stations allowed under Fairfax County's Comprehensive Plan. Analysis was completed for Reston/Herndon and Tysons Corner in Fairfax County to determine secondary impacts from the allowable increase in densities (completed for the Draft EIS but not re-assessed for the Final EIS) However, the travel demand forecasts in the Final EIS are based on the Metropolitan Washington Council of Governments' Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun County. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. As noted, the Project Team did calculate ridership based on density bonuses in the Tysons Corner and Reston/Herndon areas for the purpose of assessing secondary traffic impacts in support of the Draft EIS, but these demand figures were not included in the Final EIS.

Concerns About Model Consistency With COG TPB

Public Comment: Lastly, if your ridership forecasts are not in line with what the COG TPB derives, how can WMATA and VDRPT expect to receive federal funding for this project and include it in the TPB Constrained Long Range Plan (CLRP) when the official MPO model was not even considered or run in your contest (Version I)? In order to get federal funds, a project must be part of the regional CLRP and meet the Air Quality Conformity Determination of the regional Transportation Improvement Program. What are DRPT and WMATA going to do if patronage forecasts for Dulles Rail conducted as part of the regional transportation planning and air quality conformity efforts result in lower or much lower ridership projections? (0112, 0462-L –19)

Public Comment: Hence, reliance on the Dulles rail model is risky. But another problem with this model is the lack of public involvement in its preparation. In contrast, COG Versions 1 and 2 are being scrutinized in public. In fact, they have been under attack from environmental groups for years and some TPB members. COG TPB has approved subjecting Version 2 to peer review. Version 1, at least, has undergone public scrutiny. In contrast, the Dulles Rail/NVMISM model has never, to my knowledge, been peer reviewed, calibrated, validated or used in other DEIS endeavors, except the I-66 Multimodal study where it was substantially revamped. The Dulles rail model should be discarded and never again be used for forecasting work in Northern Virginia or anywhere else. (0112, 0462-L –20)

Response: *The NVMISM model used for ridership estimation was an adaptation and refinement of the Version 1 Model, not a replacement. This approach was used because the Version 1 model was region wide and was meant to describe regional travel flows. The NVMISM model refined this model in terms of a more detailed highway and transit network, smaller transit analysis zones that more closely reflect the differences in land use, and the incorporation of BRT into the model.*

In addition, the Version 1 model did not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for park-and-ride capacity and other station area improvements. The Travel Demand Forecasting Methodology and Results Technical Report (June 2002) was a public document and therefore this comprehensive description of the modeling process was available for detailed scrutiny. The NVMISM model has been used twice before and the adaptations to the model between uses have been publicly documented.

Modal Split for Metrorail and BRT

Public Comment: That modal split for rail to Dulles Airport is only one percentage point higher than BRT. (0446, 0218-M –9)

Public Comment: That modal split for rail to Dulles in 2025 is only one percentage point lower - I'm sorry, higher than BRT. (0446, 0146-T –9)

Response: *The Draft EIS outlined mode share by sections of the Dulles Corridor (Tysons Corner, Reston, Herndon/Dulles, and Loudoun East). In Tysons Corner, the difference in mode split between BRT and Metrorail ranges from 6.1 to 6.6 percent (with Metrorail having the higher mode share). In Reston, the difference ranges from 1.9 to 3.3 percent. In Herndon/Dulles, the difference ranges from 1.2 to 3.0 percent and in Loudoun East, the differences range from 0.1 to 0.3 percent.*

Difference Between New Trips and New Riders

Public Comment: That the terms "new trips" and "new riders" are used interchangeable, when in fact new riders refer not to new individuals using a facility, but new trips. Under the existing definition, a new transit rider traveling to work and back is counted as two new riders. (0446, 0146-T –7), (0446, 0218-M –7)

Response: *Table 6.3-9 of the Draft EIS did use the terms new riders and new trips interchangeably. The 'New Riders' column in the table did not refer to a new person or individual using transit (a person would presumably make two trips per day) because of implementation of the BRT or Metrorail Alternative. Rather the column refers to the additional trips beginning or ending in the Dulles Corridor over and above the trips of the No-Build Alternative.*

Model Version, Calibrations, and Confidence Interval

Public Comment: Consultants working for DRPT and WMATA should be instructed to redo the entire travel demand forecasting analysis using the current COG/TPB Version II models set, or at least generate some ridership projection based on Version 1, which is the official MPO model. Why it was not even considered for this DEIS needs to be explained in detail. This analysis should include a new set of express bus routes connecting neighborhoods in the Dulles Corridor with "downtown" areas of Arlington County and the District of Columbia - fashioned after the original bus-on-freeway concept used in the Shirley Highway Corridor (but without buses from American Motors). There should be extensive documentation of the original Shirley Express bus service available in the archives of VDRPT or the U.S. Department of Transportation. When complete, the results (all of the results) should be released to the public without charge via the World-Wide Web. Other questions that must be answered are:

1. Has the NVMISM/Dulles rail model been calibrated? I understand it cannot be due to the "deep nesting" method it relies on to determine trip generation. Is that so?
2. What is the +/- (confidence interval) around these forecasts? What's the uncertainty? (0112, 0462-L –21)

Response: *The NVMISM model used for ridership estimation was an adaptation and refinement of the Version 1 Model, not a replacement. This approach was used because the Version 1 model was region wide and was meant to describe regional travel flows. The NVMISM model refined this model in terms of a more detailed highway and transit network, smaller transit analysis zones*

that more closely reflect the differences in land use, and the incorporation of BRT into the model. In addition, the Version 1 model did not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for parking capacity and other station area improvements.

Other than certain Loudoun County routes, express routes from the Dulles Corridor to the downtown areas of Arlington and the District of Columbia are not part of the Build Alternatives of the Final EIS, and therefore were not modeled. The model was calibrated as well as possible given the level of data available at the time of its development (1996). A lack of adequate travel data has been a problem for the Washington area and has plagued all model development efforts for at least 30 years, including the most recent MWCOG Version 2 efforts. The level of data was not sufficient then (nor is it now) for a full, detailed statistical calibration of all components. In lieu of the availability of detailed travel data, travel behavior was stratified in logical patterns, ridership "targets" for each strata were assembled from a variety of sources, service elasticities were set based on national practices, and market-specific constants to represent the "other" factors in travel choice were estimated to match the ridership targets. This is the state of the practice throughout the country

The development of a regional travel model does not lend itself to a statistical estimation of error terms. The model is developed to match base year information at the greatest level of detail possible. Thus, the forecasts are made so as to predict the "most likely" outcome and to be used to assess the differences between alternatives in order to make "better" choices from the available data. Also, the structure of the modal choice model, which is usually the source of most of the comments concerning statistical validity, is actually only a relatively small part of the overall uncertainty in the process. Items which are likely to create at least as much uncertainty include the projection of population and employment in total magnitude and distribution by small area; changes in travel behavior due to socioeconomic trends such as labor force participation rates by women; impacts of technology such as telecommuting; actual changes in the transit "competition"(i.e., the construction of highway facilities); and the true costs of travel due to fuel prices, fuel efficiencies, technology trends, transit operating efficiencies.

Overly Optimistic Ridership Estimates for Metrorail

Public Comment: The DEIS projects overly optimistic ridership estimates for rail (as high as 73,000 when factoring in high-density development near proposed stations), and low balls BRT, largely because it fails to provide stops in Tysons Corner - a major jobs destination and activities center. The methodology used to project these inflated ridership estimates for rail was the "Northern Virginia Major Investment Study Model" (NVMISM). WMATA and VDRPT chose to base their study on this model instead of the approved modeling techniques of the National Capital Region Transportation Planning Board (TPB), known as Versions 1 and 2. The NVMISM model was based on "the Dulles rail model," developed in the early 1990s primarily to build a case for rail to Dulles Airport. This model has never been discussed in public and was never accepted for use by the TPB, which is the official metropolitan planning organization (MPO) for the Greater D.C. area, including Fairfax and Loudoun counties. (0112, 0462-L -3)

Response: *In the Dulles Corridor Transportation Study (June 1997) and in initial analysis of alternatives in the Draft EIS, bringing BRT into Tysons Corner and developing additional stations in the area was examined. Based on the goals of BRT, specifically rapid trip times and a 'rail like experience' it was determined that running BRT vehicles on local congested streets within Tysons Corner would detract from the goals for BRT. For this reason it was determined that a single station served from the Dulles International Airport Access Highway was the most appropriate BRT alignment.*

The NVMISM model used for ridership estimation was an adaptation and refinement of the Version 1 Model. This approach was used because the Version 1 model was region wide and was meant to describe regional travel flows. The NVMISM model refined this model in terms of a more detailed highway and transit network, smaller transit analysis zones that more closely reflect

the differences in land use, and the incorporation of BRT into the model. In addition, the Version 1 model did not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for parking capacity and other station area improvements.

Version of Regional Travel Demand Model Used for the Analysis

Public Comment: The project team continues to use the Northern Virginia Major Investment Study (NVMISM) “Dulles Rail Black Box” model for this SDEIS rather than the current release of the COG/TPB Version 2 travel demand forecasting model, which you pledged to use in the final EIS. (0016 0122-18)

Public Comment: I did not get answers to my questions from John Dittmeier about what modeling technique he used in this round. In the supplement hearing report on the first EIS, the project team said they would use a more-credible model - the COG Version 2 model - in the final EIS. I believe that model should be used now. (0016 0122-9)

***Response:** DRPT and WMATA did not commit to use the MWCOG Version 2 model in the Final EIS. When the EIS process began approximately four years ago, the decision to use the NVMSIM model was based on the fact that only an early version of the Version 2 model had been developed and was not yet available in a calibrated form. This decision is documented in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002), prepared in support of the Draft EIS.*

Federal Government/MWAA Ownership of DIAAH

Public Comment: Is it necessary that the Federal Government/MWAA retain title to the Dulles Airport Access Road (DAAR)? (See Attachment B). (0427, 0427-E –10)

Public Comment: Given the traffic patterns that have emerged or been developed for access to the DIA, there is little or no justification or rationale for the Federal Government/MWAA to continue to hold title and control the DAAR. The current situation merely transfers the vehicular traffic management problem sixteen (16) miles to the east of the entrance of the DIA and then becomes a Commonwealth of Virginia responsibility. DIA entry and egress traffic then enters/exits three ways, a portion continues to I-66 and points east. The remaining traffic divides between north and south on I-495 or leaves/enters the DAAR from/to the DTR for local destinations. During high-volume traffic periods, many of the taxis, limousines, and vans go north on I-495 to the George Washington Memorial Parkway and thence into the District of Columbia rather than experience the delays on I-66 inside the Beltway (I-495). It is recommended that title to the land and control of the DAAR currently held by the Federal Government/MWAA be transferred to the Commonwealth of Virginia as a provision of the Rail-to-Dulles Project authorization/appropriation bill. This action would facilitate the design of the rail and/or BRT and other mass transit facilities, reduce expenditures for both the MWAA and the Commonwealth of Virginia, and permit the development of a well-planned and engineered Dulles Corridor mass transit/traffic management facility. To continue the existing arrangement would unnecessarily involve the MWAA and most likely, complicate the design and engineering of the Dulles Corridor mass transit facility. (0427, 0427-E –12)

***Response:** The Metropolitan Washington Airport Authority (MWAA) was created by an act of Congress to manage National Airport and Dulles Airports in the Capitol Region. The Dulles International Airport Access Highway was built to ensure efficient access to Dulles Airport from Washington, D.C. and the entire region. The Dulles Toll Road was later constructed to increase mobility in Northern Virginia. MWAA as authorized by the Federal Aviation Administration controls the DIAAH to ensure continued efficient transportation to and from Dulles Airport. There are currently no plans for this Project to request a transfer of ownership of the DIAAH from MWAA and the U.S. Department of Transportation to the Commonwealth of Virginia.*

B. Supplemental Draft EIS Comments

State Agency Comments

Minimize Impacts to Roadway Operations

State Comment: “These modifications would require taking some of the I-66 right-of-way.” Please ensure that these plans and agreements are well-coordinated with VDOT, so that current roadway operations and potential future improvements to I-66 are not affected. (0091 0106-19)

Response: *DRPT and WMATA will continue to coordinate with VDOT during preliminary engineering and final design.*

Traffic Impacts at Park and Ride and Stations

State Comment: “Parking at Tysons West Station would be reduced to 500 spaces and be constructed as part of a joint development project. The specific location and design of the park-and-ride facility is not known at this time, but the anticipated cost of the facility is assumed as part of the Dulles Corridor Rapid Transit Project. Vehicles accessing the stations would use local roads.” Please explain how the traffic impacts of the proposed future 500 space park-and-ride facility and station access will be addressed. (0091 0106-3)

State Comment: “The implementation of the proposed LPA, and, specifically the provision or expansion of park-and-ride and Kiss & Ride facilities, would result in increased traffic on local roadways around stations.” Please indicate in the Final EIS the measures required to mitigate traffic impacts on local roadways around stations and identify which measures will be completed by the Project and which measures will not be part of the Project. (0091 0106-8)

Response: *The traffic analysis for the Tysons West Station are presented in Chapter 6 of the Final EIS and in the Traffic Analysis Technical Report.*

State Comment: “Based on the mode of arrival data presented in Table 6.2-3, the 2025 park-and-ride person-trips that would be generated at the [Wiehle Avenue] station under the proposed LPA and proposed LPA Phase 1 are expected to change minimally compared to the Metrorail Alternative. Therefore, it can be assumed that the general traffic impacts expected in the vicinity of the station area would be similar to those documented in the Draft EIS for the Metrorail Alternative T6/Y15).” During the period when the Wiehle Avenue Station operates as the interim terminus of the LPA Phase 1, traffic patterns will differ substantially from those that can be anticipated when this station becomes an intermediate station. It can be anticipated that more riders will access the transit system at this location, since this will be the most convenient rail access option for potential riders to the west of Wiehle Avenue. (0091 0106-10)

State Comment: Since FTA is only considering funding for Phase 1 at this time, please indicate the measures the Project will take to minimize level of service degradation at the station entrance and its vicinity as a result of the Wiehle Avenue Station being the interim terminal station. For example, indicate how the Project will address the possibility of extensive queuing from the eastbound DTR ramp to northbound Wiehle Avenue in the AM and possibly the opposite movement in the PM. In the sentence “...extensive queuing thus making the westbound...,” the word westbound may be incorrect. Queuing is expected on the eastbound ramp. (see above) (0091 0106-11)

State Comment: “The additional traffic entering the station via Isaac Newton Drive would have negligible effect on traffic operations.” Traffic balances itself out and when the traffic is congested on the Wiehle Avenue corridor and the toll road ramps, drivers will use Sunset Hills Road. Therefore, a possible approach to balancing traffic may be to build a right turn only lane on Sunset Hills Road at the entrance to the station. (0091 0106-13)

State Comment: “Proposed mitigation strategies for traffic impacts at Wiehle Avenue include adding turn lanes at intersections, parking management techniques, preferential treatment for rideshares, financial/time incentives, and information and marketing campaigns.” Adding turn lanes at intersections does not seem adequate to address the traffic impacts that will occur as a result of the interim terminal station located at Wiehle Avenue. Also, please provide background analysis as to how these proposed mitigation measures were determined, and identify roadway improvements that would fully address the traffic impacts. (0091 0106-5)

Response: *With Wiehle Avenue as the interim end-of-line station for the Wiehle Avenue Extension, there will be more bus and Kiss & Ride activity in the morning and evening peak periods than with the station as an intermediate station. The park-and-ride traffic for the 2,300 space structure would, however, be identical to that when Wiehle Avenue Station is an intermediate station along the full 23-mile extension of Metrorail. Moreover, the park-and-ride will likely be full before the local peak hour of Reston; in other words, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m. while the local peak hour would be between 7:30 a.m. and 8:30 am. Additional analysis of traffic effects for both the Full LPA and the Wiehle Avenue Extension has been conducted in support of the Final EIS and are included in Chapter 6. Mitigation measures for anticipated effects have also been identified.*

Clarifications Regarding Proposed Traffic Mitigation

State Comment: The proposed traffic mitigation measures listed [Section 6.2.3] do not fully address the impacts on the existing transportation system. Please provide technical analyses that validate and document the completeness of this list. (0091 0106-17)

Response: *The Project Team reanalyzed traffic effects in support of the Final EIS. The Team will provide the Traffic Analysis Technical Report to VDOT.*

State Comment: Vol II, p. 081 It is unclear whether the intersection improvements (Lengthen SB Route 7 dual left) proposed with the DEIS are still proposed with the preferred LPA. (0093 0109-9)

Response: *Because of the reduced park-and-ride capacity of the Tysons West Station, this improvement would no longer be part of the Project. This conclusion is based on a traffic re-analysis conducted in support of the Final EIS.*

State Comment: This table [Table 2.2-2] indicates that the number of intersections at LOS F (am or pm) does not change from existing conditions, or gets worse. This information is not shown for the “LPA Phase 1 Opening Year” cell – please include. Also, please include the specific intersections (as listed in traffic mitigation section of SDEIS) and the proposed mitigation measures to address the traffic impacts at these intersections as a result of this project. (0091 0106-2)

Response: *Chapter 6 of the Final EIS contains the requested information.*

Construction Impacts and Mitigation

State Comment: This chapter [Chapter 6] should include a commitment to develop and implement a Congestion Management Program to operate during the construction of this project, especially in the Tysons Corner and Wiehle Avenue areas. (0091 0106-20)

Response: *Congestion management measures for incidents during and due to construction of the Metrorail Extension will be developed during preliminary engineering and final design.*

Suggested Tysons West Circulation Improvements

State Comment: Option E site plan of Tysons West Station entrance and facilities

The Project Team may want to consider a left-turn pocket at the proposed Station Entrance on westbound Tyco Road (heading toward Route 7) to accommodate left-turn movements into the station. Also, appropriate traffic studies and any other documentation must be provided to VDOT in support of the proposed signal on Tyco Road. This needs to accompany any formal request to VDOT for such signal installation. (TE) (0149 6-1)

***Response:** The Project Team will consider the recommendation of a left-turn pocket and of a signal warrant analysis during preliminary engineering.*

Local Agency Comments

Clarify Responsibilities for Transportation Improvements

Local Comment: Clarify which transportation improvements will be done as a part of the project, and which are "mitigation" that may be completed by others. (0093 0109-1)

***Response:** Chapters 2 and 6 of the Final and the final General Plans describe and depict the transportation improvements that will be developed as part of the Project. All measures proposed to mitigate anticipated effects of the Project will be implemented by DRPT.*

Clarifications Regarding Proposed Traffic Mitigation Measures

Local Comment: The traffic mitigation measures identified in the SDEIS should be programmed by the Virginia Department of Transportation at the earliest possible date so that they are constructed before the rail system begins operation. (0083 0098-3)

***Response:** The traffic analysis in support of the Final EIS process identified roadway mitigation measures for the two Build Alternatives. DRPT and VDOT will program these improvements in order to complete their construction by the opening year of the Wiehle Avenue Extension.*

Local Comment: TRANSPORTATION MITIGATION IMPROVEMENTS. Two issues should be clarified with regards to Chapter 6 - Transportation Effects, 6.2.3 Transportation Mitigation, Table 6.2.7 presented on page 6-22 and 6-23. Specifically, the table provides a summary of proposed mitigation options to include construction of an additional through lane on Northbound (NB) and Southbound (SB) approaches to the westbound (WB) Dulles Toll Road ramp at Fairfax County Parkway and construction of an eastbound (EB) right turn lane onto Herndon-Monroe Parkway/Van Buren Street intersection. According to the Table 6.2.7, these proposed mitigation measures are required by 2025. We believe that both of the measures are warranted and should be completed prior to the opening of the Herndon-Monroe Rail Station, rather than by 2025. A northbound right turn lane at Van Buren Street and Herndon Parkway is also a critical need prior to the opening of the Herndon Monroe Station. (0132 0171-5)

***Response:** The traffic analysis conducted in support of the Final EIS process identified roadway improvements proposed as mitigation measures for the two Build Alternatives as detailed in Chapter 6 of the Final EIS.*

Public Comments

Public Comment: How will construction of rail during Phase 1 affect buses and qualifying cars that seek to use the Access Road? Will they be prevented from doing so? When? Will the trip be impeded? (0068 0173-7)

Response: Construction of the Wiehle Avenue Extension will include realignment of portions of the DIAAH and construction of one median Metrorail station and track. To complete this, there may be closures of shoulders and possibly one lane of the DIAAH during non-peak periods. If safety concerns warrant, a brief closure of one direction of the DIAAH could occur in an overnight period to transport materials and equipment if traffic conditions allow. All lanes of the DIAAH will be kept open during peak periods.

Roadway Level of Service Analysis

Public Comment: Please project the Level of Service (A to F) along the Dulles Toll Road according to AASHTO methodology for the major interchanges from I-495 to Route 772, both for year of opening of Phase I (2009) and year of completion (2025). Do this estimate both for 1) Dulles Rail in operation, and 2) Dulles Rail not in operation. (0061 0117-2)

Public Comment: We'd like to see a level of service projections for both the toll road and the Greenway through 2025 both with and without Dulles Rail in place. (0061 0136-3)

Response: Chapter 6 of the Final EIS presents the anticipated levels of service on the Dulles Toll Road and the Dulles Greenway.

Access/Egress Concerns

Public Comment: Our chief concern is our exit next to your proposed exit on to Tyco Road. We must keep a second exit from our premises as required by Fairfax County Fire and Rescue for the safety of our tenants. Our other exit is primarily an entrance, due to the sight distance on Tyco Road. Your proposed exit eliminates some of our much-needed parking. Fairfax County is very strict about required parking in the Tysons area. The loss of parking spaces would mean the loss of tenants. The proposed exit traffic light causes an egress problem inasmuch as we cannot exit on green or red. These could all be eliminated by moving your proposed exit to the east, leaving our exit and parking in place, but still allowing you to exit onto Tyco Road perpendicularly but with a shorter bus stacking distance. Fewer buses will also enhance our sight distance to the east, probably required by VDOT. (0157 6-1)

Response: These issues will be addressed during preliminary engineering, as the design and vehicular circulation of the Tysons West Station facilities are refined.

Traffic Impact Study at East Falls Church Station is Needed

Public Comment: The East Falls Church Metro Station will be the last station on the Silver/Orange line, and will have a significant increase in service frequencies. We believe it is contradictory to assume, as the EIS does, that there will be no traffic impacts at, and around, this station.

We take this opportunity to request once again that the EIS for the Dulles Corridor Rapid Transit Project must include a traffic impact study for the area around the East Falls Church Metro Station. (0145 6-1)

Response: Implementation of the Project would result in increased off-peak Metrorail service at the East Falls Church Station. However, operating plans for the Wiehle Avenue Extension and Full LPA assume no additional feeder bus service, nor any new park-and-ride capacity for the off-peak period for this station. Because the station's existing park-and-ride facilities are typically full by 8:00 AM on most weekdays and parking is controlled on local streets, it is not anticipated that increased off-peak Metrorail service would generate additional traffic in and around the East Falls Church Metrorail Station. Based on the analysis of the forecast ridership volumes for the East and West Falls Church Metrorail Stations, the Project Team does not feel that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in early 2005. This new facility is part of the analysis in support of the Final EIS. The Project Team

did initiate meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.

Minimize Impacts to Roadway Operations

Public Comment: t. The location of a proposed LPA Phase 1 alignment ending approximately 2000 feet west of the Wiehle Avenue Station would place it too near the exit ramp for Reston Parkway (at 2-25). The impact of that proximity needs to be evaluated in the SDEIS. (0068 0173-37)

Response: *The Metrorail alignment and station will be entirely within median of the Dulles International Airport Access Highway and will not interfere with Dulles Toll Road operations at the Reston Parkway ramps.*

Traffic Impacts at Park and Ride and Stations

Public Comment: The traffic impact of the new rail service will be further compounded by a multi-story park-and-ride structure being built at the WFC Metro station. (0026 0027-3)

Public Comment: Improving the Great Falls/Haycock intersection with turn lanes. (0087 0102-9) (0089 0104-9) (0099 0115-9) (0104 0121-7)

Public Comment: The Dulles rail public hearings report states on page 273 that traffic impacts from the WFC park-and-ride facility will be addressed by that project, and therefore, the higher traffic volume created by the park-and-ride facility is included in the Dulles rail baseline. Yet there has been no study done of traffic impact of the park-and-ride project on the neighborhood streets outside the immediate vicinity of the station or planned mitigation in the staff reports prepared by either the Fairfax County Planning Commission or the Washington Metropolitan Area Transit Authority for the park-and-ride facility. Somewhere, this traffic impact needs to be addressed by either the rail or garage project. (0026 0027-13)

Public Comment: The buck is being passed between the WFC park-and-ride and Dulles rail projects. The traffic impact on our community needs to be addressed by either the rail or the garage project and the Virginia Department of Transportation. (0099 0115-3) (0089 0104-3) (0087 0102-3)

Response: *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

For the purposes of this project, mitigation measures were suggested for those intersections that would have unacceptable levels of service (LOS E or F) and delay times five or more seconds or five percent greater than those experienced for the No-Build Alternative. Based on the analysis in support of the Final EIS, which included the new park-and-ride structure at West Falls Church Station, mitigation would not be warranted at Route 7/Haycock Road, Great Falls Street/Haycock Road or at the Haycock Road/Park-and-Ride entrance under the two Build Alternatives, as levels of service and delay times are improved or only slightly more than those for the No-Build Alternative.

Public Comment: The SDEIS fails to assess the impact of “conversion of the 830-space surface lot to a 2,000-space parking structure” at the Route 606 Station. The impact on arterial feeder roads, as well as residential neighborhoods needs to be adequately and objectively assessed. (0068 0173-14)

Response: *The traffic analysis in support of the Final EIS estimated the impacts of a 2,750-space park-and-ride facility at Route 606 Station in 2025; this represents a 2,000-space expansion of the existing facility.*

Public Comment: Highway traffic around stations will not be a major problem. After the Vienna MetroRail station opened and drew about 17,000 weekday passengers on plus off, VDOT found only five percent more traffic, less than natural growth. What traffic fears overlook is that cars that park stop generating VMT, reducing congestion at all of the intersections they no longer drive through. (0054 0090-3)

Response: Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region were important to us while preparing the Final EIS.

Clarifications Regarding Proposed Traffic Mitigation Measures

Public Comment: Please don't forget that Wiehle in the Lake Anne old section doesn't meet VDOT standards, and any funding should include ancillary improvements to the actual rail-depot-parking funding. (0045 0046-2)

Public Comment: Wiehle Avenue between Sunset Hills Road and Baron Cameron Avenue is built to an earlier standard, with narrower lane widths and greater vertical and horizontal curvature than is permitted today. This section of Wiehle Avenue will carry the majority of traffic from the north. It is already overwhelmed, and I am not aware there are any plans for its improvement. (0096 0112-2)

Response: The recommended improvements are not proposed as part of the Project. These improvements would be the responsibility of VDOT and the Project Team has shared your comment with VDOT.

Change in Character of Roadways

Public Comment: VDOT will only consider making changes to abatement measures on VDOT-run roads such as the Connector Road, if there has been a change in the "character" of the road. What are the legal standards for determining whether the addition of the Dulles Toll Road and the Dulles Greenway (which feed traffic to the Connector) constitute a change in the "character" of the Dulles Connector? (0025 0026-7)

Response: VDOT's noise abatement policy is summarized below:

STATE NOISE ABATEMENT POLICY

It is the policy of the Virginia Department of Transportation (VDOT) to employ the following criteria and procedures in determining the need for and the reasonableness and feasibility of noise abatement measures along Virginia's highways. The U. S. Code of Federal Regulations Part 772 (23 CFR 772) will be the guiding document for the analysis and abatement of highway traffic noise.

TYPE I PROJECTS

A Type I project involves the construction of a highway on new location or the physical alteration of an existing highway which significantly changes the horizontal or vertical alignment or increases the number of through traffic lanes. When the abatement criteria contained in this policy are satisfied in conjunction with a Type I project, noise abatement must be provided.

TYPE II PROJECTS (RETROFIT)

A Type II or retrofit project involves the construction of noise abatement along an existing highway when not in conjunction with an improvement of that highway. VDOT does not participate in Type II or retrofit noise abatement.

Need for Traffic Calming Features

Public Comment: [Our community needs] speed bumps (for the cut through speeders) and sidewalks. (0121 0155-2)

Public Comment: Traffic calming based on anticipated future volume of traffic and put into place before the new rail and WFC park-and-ride facilities open. Traffic calming measures for communities in the

vicinity of Metrorail stations impacted by the new line should be included in the project budget. (0026 0027-7) (0087 0102-8) (0089 0104-8) (0099 0115-8) (0104 0121-6)

Response: *Traffic calming measures are tools made available to communities to alter traffic characteristics within that community. VDOT has a process through which individual communities can investigate and request the implementation of traffic calming measures which best suit their needs.*

Roadway Congestion Impacts

Public Comment: Our research has indicated that urban areas that invested in rail have worse traffic congestion than urban areas that haven't. The reason is the money is better spent in other ways. Please confirm or deny this conclusion. (0061 0069-11) (0061 0117-4)

Response: *Over the next twenty years, congestion in the Dulles Corridor and the region will be increasing due to forecasted increases in population and employment growth. The two Build Alternatives of the Final EIS will provide an alternative mode of transportation within the region. While it is stated in the Final EIS that the project alone will not solve the current congestion problems, the Project would increase the capacity of the transportation system in the Dulles Corridor.*

Public Comment: The most intractable problem, north-south travel, is made worse with Dulles Rail. (0061 0069-12)

Response: *The traffic analysis completed for the Draft EIS and Final EIS has not shown that north-south travel in the Dulles Corridor will be worsened under the two Build Alternatives, relative to the No Build Alternative.*

Public Comment: our research indicates that the complete 22-mile project will only take about 5,000 cars off the road by the time it is finished in 2025. 5,000 cars a day is about the annual of traffic growth along the Dulles Corridor. Accordingly, we do not believe the Dulles Rail will have a significant impact on traffic congestion. In fact, it will have almost no effect. Please confirm these numbers or provide a comparable analysis. (0061 0069-2)

Public Comment: Our research indicates that the complete 22-mile project will only take about 5,000 cars off the road by the time it is finished in 2025. Now, 5,000 cars a day is about the annual rate of traffic growth along the Dulles Toll Road. (0061 0136-2)

Public Comment: Our research indicates that the complete 22-mile project will only take about 5,000 cars off the road by the time it is finished in 2025. 5,000 cars per day is about the annual rate of traffic growth along the Dulles Corridor. Accordingly, we do not believe that Dulles Rail will have a significant impact on traffic reduction, in fact, it will have almost no effect. Please confirm or modify these numbers. (0061 0117-1)

Response: *As presented in Chapter 6 of the Final EIS, the total number of new transit trips estimated for the entire region as a result of the implementation of the Full LPA is approximately 48,000.. With assumed average vehicle occupancy of 1.1, this translates into 43,000 fewer automobile trips regionally. However, congestion is still expected to continue due to expected population and employment growth, as it is in the No Build Alternative.*

Public Comment: The project team failed to provide data on intersection levels of service in the planned opening year (2009) either. Congestion relief is by far the most important "need" in the D.C. area (0016 0122-13)

Response: *The Traffic Analysis Technical Report prepared in support of the Final EIS contains the requested information.*

Public Comment: h. The claim that some 257.4 million VHTs will be eliminated needs to be revised and based on realistic ridership data, as well as straightforward traffic modeling that accounts for motorists who will congest arterial routes rather than pay either increased tolls (i.e., tolls that will rise substantially as partial payment of a local or state funding share), or the hefty cost of a Metrorail ride to/from/beyond/within this Dulles Corridor area. (0068 0173-25)

***Response:** The Dulles Toll Road toll structure and the Metrorail fares were inputs to the travel demand forecast model. The model's output was the basis for the analysis of traffic effects for both the Full LPA and the Wiehle Avenue Extension presented in the Final EIS.*

Air Quality Impacts

Public Comment: The purpose and need says that the purpose of this is because the toll road is going to exceed capacity. It talks about the degradation of air quality, however, if you look in the details, you will see this quote: "The implementation of the proposed LPA and specifically the provision or expansion of Park & Ride and Kiss & Ride facilities would result in increased traffic on local roadways around stations." In fact, there are going to be six Stanley (ph) intersections with this LPA, and you didn't even provide, as far as I can tell, what the no build would do for this phase. (0016 0140-3)

***Response:** The air quality analysis provided for the Dulles Corridor Rapid Transit Project evaluated several of the "worst case" intersections within the project corridor in order to determine whether the potential for exceeding the National Ambient Air Quality Standards (NAAQS) was likely to occur. As reported in the Chapter 4 of the Final EIS, no non-conformance with those standards is anticipated to occur at any of the intersections in the Project corridor. In fact, in nearly all cases anticipated CO levels are predicted to be below the NAAQS.*

Concerns about Traffic Impacts in Vicinity of Wiehle Avenue Station

Public Comment: Wiehle Ave. and the adjacent arterials of Sunrise Valley Drive and Sunset Hills road are already operating at failing levels of service, but Phase I calls for a terminal station at Wiehle Avenue. This will have the effect of taking traffic off the Toll Road and increasing it on our local roads - roads which were designed years ago for much lower traffic volumes and frequently have serious accidents. Correcting these problems could literally be a matter of life and death for Reston's citizens. Given the safety concerns, what planned road improvements are proposed to mitigate these substandard conditions and where is the funding coming from? (0038 0039-1)

Public Comment: It can be very difficult today to turn in and out of parking areas along Wiehle and Sunset Hills Road. The Wiehle terminus will most certainly cause a dramatic increase in traffic volume at these entrances. Has a traffic study been conducted to determine if the minimal improvements proposed in the DEIS will solve these problems? And where will the money come from for these or other required improvements which might be revealed by a future traffic study? (0038 0039-2)

Public Comment: The eastbound exit off the Toll Road at Wiehle Avenue frequently backs up during the AM peak hour. And traffic is already bumper-to-bumper on the Toll Road between Wiehle and Reston Parkway. I'm concerned that the additional cars and buses exiting at Wiehle will cause east-bound traffic on the Toll Road to back up into the Reston Parkway on-ramp causing Reston Parkway itself to fail. Have you studied this potential impact? (0038 0039-3)

Public Comment: Wiehle Avenue is a four-lane road that terminates in a T-intersection at Sunrise Valley Drive. It is already a major rush hour bottleneck. We are concerned that our roads will fail with the added traffic created by a terminus station. (0039 0040-3)

Public Comment: Reston Association requests that Fairfax County initiate a comprehensive Planning Study to assess the traffic and parking impacts of ending the first phase at Wiehle Avenue and to make

recommendations for improvements to accommodate these impacts. Such study should include at a minimum:

- Impact of increased vehicular traffic on Reston roadway system and environment.
- Increase of the traffic capacity of access roadways within Reston and its approaches.
- Intersection improvements and traffic controls.
- Investigation of accelerating the expansion of Herndon/Monroe parking facilities.
- Limited parking at the Wiehle Avenue station to serve only the immediate Reston area.
- Commitment to policies that will limit parking demand at Wiehle Avenue.
- Consideration of permit parking for residents.
- Potential for cut-through traffic on residential streets/traffic calming considerations.
- Increase of bus service within the Reston area so that Reston residents can easily access the station without driving to it.
- Pedestrian and bicycle access in and around Reston to facilitate safe and efficient access to stations, especially provision of convenient, grade-separated, direct pedestrian and bicycle access from all four quadrants of the Wiehle Avenue interchange. (0039 0040-8) (0040 0041-5)

Public Comment: What provisions have been made to mitigate the impact on access thoroughfares? (0042 0043-6)

Public Comment: How will the nearby roads be impacted by a station at this location (Wiehle, Sunrise and Sunset Avenues, including the connecting intersections to these roads such as North Shore-Wiehle, and Fairway- Wiehle)? (0042 0043-7)

Public Comment: 2) Wiehle Avenue is already overcrowded at rush hour and this plan would only draw in a heck of a lot more traffic that the existing road infrastructure could not handle - getting to and out of the Wiehle Avenue facility would be a nightmare, and 3) that proposal does nothing to alleviate airport traffic at one of the country's fastest growing airports as it would not provide rail access to the airport. (0046 0047-2)

Public Comment: The Wiehle Avenue / Dulles Toll and Access Road interchange will fail as presently configured when it tries to serve all the traffic at the interim terminus. It needs to be reconfigured as a cloverleaf or some other design that reduces the number of stop lights (0064 0152-5)

Public Comment: The SDEIS fails to assess the impact of use of the Wiehle Avenue area as an "interim" terminus point. The environmental, social impact and financial impact needs to be evaluated in terms of incremental impact on arterial roads congestion, wasted time in the resulting additional gridlock due to drivers trying to reach the station, where turn-away parkers will park and impede normal uses, etc. (0068 0173-13)

Public Comment: That intersection, Wiehle and Sunset Hills, is already congested beyond belief. The proposal that is presented here is to add a lane into Kaiser, a left lane, a direct lane onto the expressway and a right-turn lane for westbound Sunrise Valley onto Wiehle. These are totally inadequate. They should be there now. Adding traffic to this will be even worse. (0073 0083-2)

Public Comment: Right now Wiehle Avenue between 7:30 and 9:00 a.m. is a parking lot from Lake Anne to the Dulles Toll Road! In the evening between 4:30 and 6:00 it is almost as bad, making it very difficult for cluster residents and all users of Wiehle to travel that short section in a reasonable time! As a result drivers are frustrated and are becoming more and more aggressive as they try to commute to and from work! Cluster residents also find it more and more difficult to exit onto Wiehle because these frustrated motorists come barreling around the curve just before our cluster entrance in their rush to make their commute just a little bit shorter. (0094 0110-2)

Public Comment: By making this station the end of the line, traffic will be impossible. Our emergency services are going to be impacted by traffic delays. The fire station at that intersection is one of the busiest in the county 7 and response times will increase as they try to get through the clogged intersections. (0098 0114-2)

Public Comment: I hope that in all your deliberations regarding the Rail to Dulles project you seriously consider the traffic patterns, and problems associated with having a terminal at Wiehle Ave. I am all for the rail and a station at Wiehle, however, I am at a loss as to what will be done with all the cars that will have to access the station. Are there any plans to either widen Wiehle, or create another road (I know not where!!)? (0103 0120-1)

Public Comment: I have seen traffic, congestion, pollution and dangerous driving increase in Reston, and on Wiehle specifically. Potentially widening Wiehle to accommodate commuters to drive to the Wiehle station will only make these factors worse, not better (0105 0123-2)

Public Comment: The short-term thinking behind the scheme to make Wiehle Avenue a "temporary" terminus for the Dulles Rail project is an absolute negative. The heart of Reston is NOT Dulles. Nothing would be accomplished other than to crowd the Dulles Toll Road even more as commuter would attempt to reach Reston and limited parking so as to board a metro train. (0056 0057-1)

Response: With Wiehle Avenue as the interim end-of-line station for the Wiehle Avenue Extension, there will be more bus and Kiss & Ride activity in the morning and evening peak periods than with the Station as an intermediate station. The park-and-ride traffic for the 2,300 space structure would, however, be identical to that when Wiehle Avenue Station is an intermediate station along the 23-mile extension of Metrorail. Moreover, the park-and-ride structure will likely be full before the local peak hour of the Reston; in other words, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m. while the local peak hour would be between 7:30 a.m. and 8:30 am. Additional analysis of traffic effects for both the Full LPA and the Wiehle Avenue Extension has been conducted in support of the Final EIS and mitigation measures for anticipated effects have been identified.

Public Comment: Also, these ridership estimates are based on road improvements in the Wiehle area as well and yet no one knows where that money will come from. (0062 0070-3)

Response: The planned roadway improvements of the region's Constrained Long Range Plan were inputs to the travel demand forecast model. By the term 'Constrained' it is meant that region has the financial capacity to fund the roadway improvements.

Concern about Neighborhood and Cut Through Traffic Impacts

Public Comment: On page 276 the Dulles rail public hearings report admits that analysis was done only on intersections nearby the WFC station, not on neighborhood streets. There is therefore insufficient data to conclude that there will not be an increase in cut-through traffic impacting the Westhampton neighborhood. (0026 0027-12)

Public Comment: The Draft EIS did not adequately study or address the traffic impact on Westhampton associated with Metro patrons using either the WFC park-and-ride structure or the East Falls Church (EFC) station to access the new rail line. We continue to have concerns with the project's analysis of traffic impacts around the WFC station and its conclusion that there is no traffic impact of the Dulles rail project on Westhampton. (0026 0027-4)

Public Comment: More study on the traffic impact on Westhampton from Metro patrons driving to the WFC park-and-ride structure or the East Falls Church and Tysons stations to access the new rail line. (0087 0102-7) (0099 0115-7) (0089 0104-7) (0104 0121-5)

Response: Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church

Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in project-related cut-through traffic in the Westhampton neighborhood.

Compatibility with High Occupancy Toll (HOT) Lanes

Public Comment: Explain how the Silver Line would be compatible with HOT lanes in the Dulles Corridor in terms of right of way availability. How will the proposed interchange with the I-495 HOT lanes be done? (0061 0117-21)

Response: *The issues associated with implementing a high-occupancy toll system in the Dulles Corridor and the possible benefits of such a system were explored as part of the Project Team's review of Dulles Plan B.*

Numerous physical, technological, and social issues may limit the ability to implement high-occupancy toll lanes in the Dulles Corridor. The analysis also showed that high-occupancy toll lanes might not have substantial mobility benefits in the corridor. If solo drivers were allowed to use the HOV lane for a fee, then it is very likely that a large percentage of the HOV lane users in the Dulles Corridor would be single-occupant vehicles, reducing the average vehicle occupancy in the HOV lane. Therefore, increased use of the HOV lane under a high-occupancy toll system would result in minimal increases in the lane's person-moving capacity, and could result in a reduction in the lane's person-moving capacity.

As the owner and operator of the Dulles Toll Road (and other major HOV facilities in the region), it would be VDOT's responsibility to fully evaluate and implement any proposals that allow travelers driving alone to use the HOV lanes during peak hours for a fee ("value pricing"). Such value pricing systems would require in-depth study. Issues include the lack of space for barrier-separation, technological challenges associated with a non-barrier-separated system, and equity considerations.

The Project Team's analysis relative to Dulles Plan B also showed that high-occupancy toll lanes might not have substantial mobility benefits in the Dulles Corridor. To remain an attractive alternative to the general traffic lanes, the HOV lanes on the Dulles Toll Road should not operate at their maximum level of capacity. If operated at 80 percent of their hourly capacity (a level that provides for congested, but relatively free flowing traffic), each lane could support 1,920 passenger cars in the peak hour—an increase of only 720 cars over the current and projected use of the HOV lanes in the peak hour (1,200 cars per hour in the peak). With average vehicle occupancy of 2.2 persons per vehicle, the HOV lanes currently support 2,640 persons per lane (2.2 X 1,200) during the peak hour. If realistic vehicle occupancy assumptions were applied for different high-occupancy toll scenarios (approximately 1.5 to 1.6 persons per vehicle if single-occupant vehicles are allowed to use the HOV lane), each lane would support approximately 2,880 persons per hour (1.5 X 1,920) to 3,072 persons per hour (1.6 X 1,920). This volume would only constitute an increase of 200 to 450 persons per hour over the current peak usage of the HOV lanes.

Moreover, it is very unlikely that incentives to increase HOV use would only appeal to people who previously used the general traffic lanes. It is much more likely that some of the new HOV users would be persons that would have otherwise used the transit system, reducing the demand for transit in the corridor.

Impact of Density Bonuses on Ridership

Public Comment: In the DEIS and SDEIS, analysis of regional transportation plan projections indicate that the planned rail system will not reduce congestion. Even ridership projections for 2020 indicate that in the long term, rail will have no significant impact on traffic congestion. Based on the projected residential bonuses and commercial bonuses around the rail stations in Tysons Corner and at the Wiehle station,

what is the projected number of rail users for each station? What is the projected number that will come by automobile? (0109 0128-6)

Response: *The impacts of density bonuses on ridership were calculated for the Draft EIS but were not in the Final EIS. The travel demand forecasts in the Final EIS are based on the Metropolitan Washington Council of Governments' Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun County. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. As noted, the Project Team did calculate ridership based on density bonuses in the Tysons Corner and Reston/Herndon areas for the purpose of assessing secondary traffic impacts in support of the Draft EIS, but these demand figures were not included in the Final EIS.*

6.3 Effects on Other Transportation Facilities and Services

A. Draft EIS Comments

State Agency Comments

Metrorail Extension in Dulles Greenway

State Comment: Dulles Greenway was recently widened to 6 lanes from Mainline Barrier Toll Plaza to Route 659. This generally leaves a median of 40' beyond shoulder (20' each side). Rail plans should update base as some locations may require more extensive roadway work. (0421, 0421-A –29)

Response: *The final General Plans (Final EIS Volume VI) uses recent digital aerial photography that depict the six-lane Dulles Greenway. For the proposed General Plans (June 2002) and for the Draft EIS (June 2002), the Project Team had evaluated the Project in a median of a future six-lane Greenway.*

Regional Agency Comments

Vertical Conflicts with Metrorail Profile

Regional Comment: Vertically, the Metrorail profile is in conflict with several of our proposed roadways, including EB-CD Rd., Ramp C and the entire Aviation Drive Ext./Rudder Rd. intersection. Each of these roadways have been set vertically to meet FAA airspace vertical clearances for Part 77 surfaces and proposed structures, so raising their profiles would not be feasible. (0440, 0440-A –15)

Response: *The Project's preliminary analysis did not indicate a conflict between the Metrorail Extension and the proposed Airport roadways. The horizontal Metrorail alignment intersects the proposed new roadways at five points and also intersects the detoured SE loop at three points. The only intersecting points not included in the analysis were the detoured SE Loops, which were assumed to remain near current elevations that pose no conflict with the vertical Metrorail alignment. The near horizontal intersection of Metrorail with Ramp B has a vertical separation of approximately 20 ft from the top of the underground structure to the top of the aerial structure (Ramp B). A detailed analysis would be conducted during preliminary engineering phase and modifications made, as required, to minimize the effect on proposed Airport roadways.*

Study Widening of DIAAH

Regional Comment: Preliminary engineering for this project should study the widening of the Dulles Airport Access Highway (DAAH) to six lanes in sufficient enough detail to determine what accommodations will be required to allow both projects to be accomplished. (0440, 0440-A –11)

Regional Comment: The Airports Authority, as stewards of the Dulles Corridor, has an interest in optimizing the throughput of the corridor while maintaining access to Dulles. Accordingly, the Airports Authority would like to emphasize our future plans to widen the DIAAH to six lanes and the need for the Dulles Corridor Rapid Transit Project not to infringe on the right-of-way for this future widening. (0440, 0440-A –2)

Response: *The final General Plans of the Metrorail Extension do not preclude the construction of the third lane of the DIAAH in either direction. If the third lane of the DIAAH is constructed after construction of the Metrorail Extension, then there will be impacts to the westbound Herndon-Monroe Park and Ride access bridge and relocations required of the Dulles Toll Road in the vicinity of the Herndon-Monroe and Route 28 Stations. The DIAAH shoulder widths may be less than standard widths, especially at the bridge underpasses to allow for a six lane DIAAH.*

Tunnel Construction is Assumed

Regional Comment: The Airports Authority's expectation, though not specified in the documents, is that between both portals and the station, a tunneling construction method will be used which does not impact existing roads or facilities. (0440, 0440-A –14)

Response: *The final General Plans for the underground section of the Metrorail Extension through Dulles Airport indicates a cut-and-cover construction. As part of the cost-reduction exercises undertaken in the summer of 2001, the profile of the underground section was raised to accommodate cut-and-cover construction. During past coordination with MWAA, the Project Team noted that the cut-and-cover alignment with the "higher" vertical profile would become part of the General Plans and included as part of the Final EIS. This method would require temporary disruptions to surface facilities and possibly warrant the construction of roadway decking, temporary roads and temporary facilities during the construction of the Metrorail Extension. Other construction methods that would minimize effects on the existing roadways may be considered during preliminary engineering.*

Coordinate With MWAA and FAA on Station Portal

Regional Comment: The eastern portal at station 1590+00 is within the runway protection zone of runway 1R-19L. Accordingly, extensive coordination with the Airports Authority and FAA will be required and height restrictions will be imposed on cranes and equipment during construction. (0440, 0440-A –16)

Response: *Consideration was given during preparation of the General Plans to the required height restrictions for cranes and equipment during construction of the Metrorail Extension. A portion of the Metrorail alignment is within the Glide Path for runway 1R-19L. Preliminary analysis determined the Glide Path elevations restrictions for this section ranged from 334 to 344 feet. Based on ground elevations at this section, cranes or other equipment could range from 20 to 40 feet high. During preliminary engineering, DRPT and WMATA will continue to coordinate with the Airport Authority and FAA to ensure compliance with these restrictions.*

Public Comments

Feeder Bus Services, Bus Service to Smithsonian Air and Space Museum, and CIT Station

Public Comment: It is essential to provide for effective bus linkage to the Dulles Center of Smithsonian Air and Space Museum and to employment centers throughout the Route 28 Corridor from the CIT / Dulles Station. Careful consideration must be given to bus service and access between this station and the Dulles Center of the National Air and Space Museum over and above usual feeder bus access. The planning for this station must give special attention to accommodating a future light rail or other permanent transit linkage with I-66 utilizing the Route 28 Corridor. (0088, 0211-M –17)

Public Comment: It is essential that we provide better -- or think out a bus linkage between probably the CIT station and the Smithsonian Air and Space Museum, which is nearly a reality in Dulles airport. That has not been given as much thought as it deserves. That's more than just a feeder bus. (088, 0172-T – 8)

Public Comment: Impact of the Air and Space Museum Annex annual visitor load requires additional clarification in terms of connectivity to DCRTF and a model (estimate) of visitor routes traveling to and from the facility; i.e., the A&S Museum is projected to attract 3+M visitors a year. This equates to approximately 8,200 visitors per day.

§ What mode of travel will these visitors use to the facility?

§ How many may be expected to use a DCRTF?

§ What are the expected routes to be used? (0427, 0427-E –4)

Public Comment: If we are really going to have a mass transit system that works, effective access to each station must be an essential element of design criteria. Each station must incorporate facilities for the use of present and future feeder systems so that there are minimal conflicts between and among the feeder buses, the cars and the pedestrians. Effective use of these stations is vital to their use by transit ridership. (0204, 0247-T –7)

Public Comment: We strongly support the construction of the CIT Dulles station. This is key if Route 28 is to have mass transit system which one day it assuredly must have, particularly with the Air and Space Museum opening to the public next year. (0204, 0247-T –8)

Public Comment: The Committee for Dulles supports the construction of the CIT/Dulles Station rail station near Rock Hill Road southwest of Herndon. The Committee for Dulles urges that careful consideration be given to bus access between this station and the Smithsonian Air and Space Dulles Center complex over and above usual feeder bus access. The planning for this station should give special attention to accommodating a future light rail or other permanent transit linkage with I-66 utilizing the Route 28 Corridor. (0204,0204-M –10) (0244, 0244-T-6)

Response: *The Smithsonian Institution has established a shuttle bus service between the National Air and Space Museum's main building in Washington D.C. and the Udvar-Hazy Center. Buses run simultaneously from either location on the same departure schedule.*

Accommodating light rail transit along Route 28 was evaluated by the Project Team but was eliminated from further consideration because plans for a Route 28 LRT system have not been developed to a level that would make it appropriate or feasible to conduct detailed coordination efforts related to these improvements (see Chapter 2 and Appendix H of the Final EIS).

Coordination with potential rail improvements in the Route 28 corridor was requested during the scoping process for the preparation of the Draft EIS. This alternative was evaluated during the early stages of the Dulles Corridor Rapid Transit Project, and was eliminated from further study. The reasons for the elimination of this alternative are fully detailed in the Final Alternatives Analysis Report (May 2001).

Focus on Transit-Oriented Development and Pedestrian Access

Public Comment: So this transit oriented development has a significant impact on the number of riders that would use the system, and also happily we saw that the number of people that could walk or bike access to the stations dramatically increased. And I was particularly interested in that because the current EIS only shows 20 people walking to the station at Route 606. So we think that you will get a lot better use if you scale back the parking and focus on the transit oriented development at that particular site. (0141, 0243-T –6)

Response: *As evaluated in the Supplemental Draft EIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team reconfigured the*

park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces.

During preliminary engineering, the Project Team will coordinate with Loudoun County and the owner/developer of the land north of the Route 606 Station to achieve efficient and pedestrian friendly connections between the proposed development and the station.

Transit Connectivity in Loudoun and Fairfax Counties is Needed

Public Comment: The main points I would like to make in terms of our needs here in Loudoun and commenting on public transit in general, and I would like to refer to a previous comment by one of the speakers who lived in Sterling is that in Loudoun County we do not have transit connectedness, and I think he used the word connectivity. We do have an accessible public transit system that goes into most of our neighborhoods. It is very rudimentary I guess is the best word for it. So in considering a Dulles Corridor Rapid Transit Project, it is very important that we have that connectedness and an expansion of transit within Loudoun County so that people who prefer not to drive or cannot drive can use a public transit system that is accessible in this county in order to access any rapid transit that is available. (0259, 0259-T -3)

Public Comment: My biggest concern at this point is that - and this has been echoed as well - that the connectivity for people in communities like Sterling park, like Cascades or Countryside, like those south of the Toll Road in Fairfax County, are considered, and that the design option that is chosen allows for adequate bus and feeder systems, whether they're WMATA buses or Loudoun County buses or Fairfax Connector buses. (0265, 0265-T -2)

Response: *The Dulles Corridor Metrorail Extension will significantly increase the opportunities for Loudoun County residents to make convenient and quick trips via transit. However, Loudoun County will have the responsibility for increasing the transit network in the county beyond the Metrorail station areas. This Project will support an expansion of the Loudoun County Transit network but the responsibility for implementing this expansion will rest with the county.*

Concern About New Riders, Congestion Relief, and Land Use Densities

Public Comment: WMATA and its consultants have not provided solid data on actual NEW riders for BRT or rail service, they have provided no data on congestion relief for the toll road and other roads, and there are assumptions about land-use densities to provide transit-serviceability that are questionable. (0112, 0269-M -2)

Response: *Table 6.1.3 in the Final EIS shows the estimated new trips for the two Build Alternatives. Section 6.2 of the Final EIS shows levels of service for key highway links and direction including the Dulles Connector Road, the Dulles Airport Access Road, and the Dulles Toll Road.*

The travel demand forecasts in the Final EIS are based on the Metropolitan Washington Council of Governments' Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun counties. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS.

Circulation Within Tysons Corner Area

Public Comment: The two largest employment centers where Kings Park residents work are D.C. and Tysons, and I would like to ensure Kings Park residents commuting by future beltway, HOV express

buses can rapidly circulate within Tysons once arriving in Tysons by express bus or future Purple Line beltway rail. (0134, 0134-T-6)

Response: *Circulation within Tysons Corner via transit was a key focus of the Project Team when developing the feeder bus plans for the Wiehle Avenue Extension. This service includes both Fairfax Connector service as well as WMATA Metrobus service. In addition to existing services, new Tysons circulator services are recommended to provide internal circulation for Metrorail riders alighting at Tysons Corner stations. Intermodal facilities are also proposed at the Tysons East and Tysons West stations as well as at Tysons Central 123 Station. These facilities would be able to handle additional circulator services that may be implemented in the future.*

Stations and Service Frequency in Tysons Corner Area

Public Comment: I firmly believe that the number of stations and the frequency of service is critical to intra-Tysons Corner transit. This fact should be incorporated into the Dulles Rail design. (0178, 0178-T-7)

Response: *The number of stations or stops and frequency of service are critical elements of design for all transit systems. These issues were taken into account when planning and designing the Dulles Corridor Rapid Transit Project. The Wiehle Avenue Extension includes four stations in Tysons Corner and will operate on 7-minute headways during the peak period.*

Travel Times Through Tysons Corner Area

Public Comment: Furthermore, the four proposed Tysons rail stations will add a significant amount of time to the running time of "rapid transit system" making it less "rapid" and will more than likely be a construction bottleneck delaying the actual opening of the rail system. (0233, 0426-M-29)

Response: *The four Metrorail stations within Tysons Corner are more than one-half mile apart. This is not unreasonable for a dense urban area such as Tysons Corner. Since many people will be walking to or from the station, spacing stations any further apart than this could result in excessive walk times and distances, thus lowering transit ridership. Construction in Tysons Corner is not anticipated to delay the opening of the Wiehle Avenue Extension..*

Interim Bus Improvements Needed

Public Comment: It appears to us that the best transition to rail would be to further improve the existing bus service in the Dulles Corridor as the interim step towards rail. For example, we would like to see the #505 bus increased in frequency during off peak hours and on weekends from the present every thirty-minute schedule to every fifteen minutes. Ideally during off peak hours, a #505 bus should leave after every westbound train arrival at Metro's West Falls Church Station. With the improvements in frequency of the #505 bus, there should also be matching improvements in the Reston Internal Buses that are coordinated with it at the Reston Town Center transfer point. (0005, 0005-L-2)

Response: *The bus operations plans included in the No-Build and the two Build Alternatives of the Final EIS reflect Fairfax County's current bus service expansion plans. In addition, the modifications of the Fairfax County plans were developed in consultation with technical staff from Fairfax County. The County's expansion plans are based on their estimates of demand for Fairfax Connector service on each route. The service frequencies on these routes, in turn, reflect this estimated demand. In addition to estimates completed by Fairfax County, bus ridership by route was forecasted for the No-Build and Build Alternatives using the Project's travel demand forecasting model. These ridership estimates were used to supplement Fairfax County estimates and acted as inputs into the final bus plans.*

Expand the Fairfax County Connector Bus Fleet

Public Comment: Further improvements in the frequency of Dulles Corridor buses is constrained now by the number of buses Fairfax County has in its Connector inventory. BRT funds would be better utilized to expand the number of buses Fairfax County has in its inventory and provide operating funds for them. The bus frequencies could be increased to provide actual ridership numbers to better guide planners of the future rail system. (0005, 0005-L –3)

Response: *The elimination of BRT (as analyzed in the Draft EIS) would not have released more funds for the operations of the Fairfax Connector express service. Specifically, the Federal funds that would have been used to fund the BRT were different from the funds that would be used to purchase new buses for the Fairfax Connector. The BRT Alternative would have been funded under the Federal New Starts program, while County bus purchases would have no Federal funds.*

BRT Impacts to Corridor Bus Service

Public Comment: The non-stop BRT service between Herndon and West Falls Church would be no better than the present Bus Route 980 service. Reston service, however, would be severely degraded by BRT. Five direct-to-Reston bus routes would have to be eliminated and all of their riders would have to make an extra transfer. The first transfer may be possible to coordinate, but two transfers on one trip are very difficult to coordinate. (0013, 0013-L –17)

Response: *BRT was eliminated from further consideration after the public and agency review and comment on the Draft EIS. BRT would have provided comparable service to the 950/980 services in the peak period but would have provided more frequent service (12 minutes frequency versus 30 minute frequency) during the mid-day. It would also have provided more frequent service to the Tysons area than the current 984 service.*

It is true some services from the Reston area that currently run directly to West Falls Church would have been modified to act as feeders to BRT. The high frequency of BRT service from Herndon-Monroe and Reston would have mitigated against a long wait for transferring passengers from these feeder routes, while BRT would have provided benefits such as higher passenger carrying capacity, higher frequencies to Tysons Corner, and better mid-day frequencies than exist under the current Fairfax Connector service.

Route 7 Bus Service Needed

Public Comment: Serious consideration should be given to creating bus service on Rt. 7 West of garage at Tysons West. (0045, 0045-CC-1)

Response: *Fairfax Connector Route 574 currently runs between Reston and Tysons Corner via Route 7 (Leesburg Pike). It is currently planned that this service would remain in place after the implementation of the Wiehle Avenue Extension.*

Add BRT Characteristics to Express Bus System

Public Comment: Many BRT characteristics should be incorporated in an improved express bus system, and I have a list of those. Strategies for reducing operating subsidy requirements and making the system profitable. (0173, 0173-T –9)

Response: *Three BRT alignment options were considered in the Draft EIS. BRT 3 most resembled the existing express bus system, but with trips from more origins within the corridor than currently in place, as well as more trips oriented to Tysons than are currently in place. In addition, BRT 3 assumed a reduced number of BRT facilities. There would be only one median BRT station, located at Reston Parkway. Off-line stations were assumed at all other locations.*

The Herndon-Monroe and Wiehle Avenue stops would have been at the existing park and ride facilities. The total new transit trips resulting from implementation of BRT 3 would have been the lowest of the three BRT alignment options (10,900 versus 12,500 for BRT 1, which least resembled the existing express bus system). More detailed descriptions of each BRT option are contained in the Transit Operations and Maintenance Plan (June 2002) prepared in support of the Draft EIS.

Feeder Bus System Access to Stations is Important

Public Comment: A well developed feeder bus system with exclusive access lanes where feasible is essential to this rail transit extension. Each station must be carefully designed to assure that future expansion of feeder bus access can be readily implemented. Kiss and ride drop-off points must fit conveniently into this mix. Considerable care must be put forth to minimize potential conflicts between feeder buses, automobiles and pedestrians. Where feasible, exclusive feeder bus lanes must be developed in the vicinity of station sites. Transit ridership would be severely reduced by traffic congestion that makes the use of the feeder bus no more effective than the use of the private car. (0088, 0211-M – 11)

Public Comment: An essential element of the design of each rail station in the Dulles Corridor is effective access via a well-developed feeder bus system. Each station must be carefully designed to assure that future expansion of feeder bus access can be readily implemented. Kiss and ride drop-off points must fit conveniently into this mix. Considerable care should be put forth to minimize potential conflicts between feeder buses, automobiles and pedestrians. To the extent possible, exclusive feeder bus lanes should be developed in the vicinity of station sites. Transit ridership would be severely reduced by traffic congestion that makes the use of the feeder bus no more effective than the use of the private car. Over time, it is possible that some form of internal shuttle bus/people mover system will become economically feasible to serve the urban centers. Close coordination among VDRPT, WMATA, VDOT and local planning officials is essential to assure that the feeder bus system works effectively. Local elected officials bear the primary responsibility in assuring that this close coordination exists. (0204, 0204-M –9)

Public Comment: Within each of these areas are multiple points of trip commencement and terminus that need to be serviced by a flexible surface system. A flexible surface system will be integrated to take a large portion of the surface congestion out of the transportation equation, while encouraging population circulation to the businesses, shopping and entertainment sites. (0148, 0148-T –4)

Public Comment: Traffic near the stations will increase. Saturation local bus service must be provided between the neighborhoods and transit stations to induce locals to stay away from their cars in getting to the Metro. Pedestrian routes and amenities must be enhanced. Consideration should be given to eliminating bus fares altogether for those using the busses to reach the stations. There should be similar consideration to eliminate the bus fares along the corridor to West Falls Church until Metrorail is available to reduce congestion, improve air quality, encourage transit use, begin to change commuting habits from SOV to transit. (0208, 0208-M –5)

Public Comment: And are there plans to make sure that the routes and schedules of local feeder bus systems are integrated with metro? Are there plans for local express bus service to the metro stations during rush hours, thereby reducing the need to build massive parking facilities? (0181, 0181-T –7)

Public Comment: Feeder bus system. We have made some references to it, but it is essential to making this process work. Not only do we need an effective feeder bus system, but it needs to be able to move to the transit stations, which means somehow building some type of exclusive busways in the vicinity of the transit stations. (088, 0172-T –6)

Public Comment: I realize that developing an adequate bus feeder system and controls on development along the corridor are not something your project team has any say in. But, having lived in Northern Virginia for many years and having visited large European cities that have a mix of bus, tram, and rail as

a way to move large numbers of people, it seems imperative that a complimentary feeder system is necessary to the success of rapid transit in the Dulles Corridor. (0401, 0401-L-5)

Public Comment: Feeder bus service to stations: The description in the draft EIS of the plans for feeder bus service to stations is completely inadequate. The EIS states that feeder bus service would be modified and refers to Chapter 6 and a separate technical study for details. However, Chapter 6 does not describe the changes or provide any details, and the technical study was almost impossible to obtain to review. The EIS should be revised to include specific information about the proposed feeder bus service for each alternative. (0392, 0392-L-10)

Response: *The feeder bus network in the Dulles Corridor is an essential part of the overall corridor transit network. Station area planning and design included accommodating feeder buses (both access to the station and circulation within the station area) as an integral part of the overall process. Under the two Build Alternatives of the Final EIS, many of the stations in the Dulles project will become major intermodal centers within the corridor, and the planning and design of these stations reflects this. The bus service plans were developed in consultation with technical staff of Fairfax and Loudoun counties. The plans have been developed with a focus on providing service from multiple origins to multiple destinations in the counties, and are designed specifically to provide mobility options that are attractive relative to making a trip by private automobile. The Transit Operations and Maintenance Plan in support of the Final EIS contains detailed route descriptions.*

The ultimate responsibility for these feeder bus networks lies with the counties. The responsibility for determining the feasibility of the elimination of bus fares would ultimately reside with the three operating agencies: WMATA, the Fairfax Connector, and Loudoun County.

Local express service to stations during rush hours was not considered as part of the plan because of the difficulty of providing express service from multiple origins. Feeder bus routes are generally short and have short trip times, thus making them attractive alternatives to the auto. Exclusive busways were not considered as part of the facility program for stations because it was determined that the positive impacts would be marginal relative to the cost and the difficulty of incorporating the busways into an already crowded street network.

McLean / Tysons Corner Feeder Bus Services

Public Comment: McLean Access to Stations in Tysons Corner: All Build alternatives would provide Tysons Corner stations close to much of the McLean area. However, the EIS does not describe how McLean residents, especially residents east of the Dulles Toll Road, would be able to access these stations, since all proposed stations except Tysons West would not have any parking facilities. The EIS should be revised to describe the feeder-bus system and the pedestrian and bicycle facilities that would be put in place to serve the McLean area. (0392, 0392-L-14)

Public Comment: I also think the issue of adequate feeder bus systems into these stations to reduce the amount of auto traffic and the amount of parking should be addressed in a more comprehensive way, with suggestions for possible solutions. (0284, 0284-T-3)

Public Comment: There is no mention of any feeder bus lines from my neighborhood [in McLean] towards Tysons, thus ensuring reliance upon our cars. (0233, 0426-M-25)

Public Comment: In the Tysons area, the rolling terrain area and the distances between the stations and some of the largest employers in the area (i.e. Gannett), it's highly unlikely that any of these stations will reach their full ridership potential without employee or residential shuttles or some other formal type of internal circulator system that may include buses, trams or some other mode(s) to link the entire area to the stations. However, for this internal circulator system to function properly, surface facilities need to be provided at each of the stations similar to what is proposed at Tysons East with the program of bus bays, shuttle bays, kiss & ride, taxi (and Flexcar?) spaces specifically tailored to the needs of the station service

areas for each alternative. A conceptual plan for an internal circulator system should be developed in conjunction with the Tysons community and should be a part of each alternative under consideration. (0387, 0387-L –11)

Public Comment: Address the increased need for feeder bus service centering on the 4 Tysons area stations, both for circulation access within Tysons and from McLean communities. (0392, 0392-L –3)

Response: *Service between McLean and Tysons Corner is currently provided by the Metrobus 15, 23 and 24 Routes. These routes do not change under the Wiehle Avenue Extension. Route 15 would serve the Tysons East and Tysons Central 123 station. Route 23 would service the Tysons East, Tysons Central 123, and Tysons West Stations. Route 24 would serve the Tysons West Station. Comprehensive feeder bus plans have been developed for Wiehle Avenue Extension through Tysons Corner. These plans identify service frequencies throughout the day, number of trips, routings, and station/stops served. These plans were developed based on detailed consultation with technical staff from Fairfax and Loudoun counties. These plans also reflect county technical staff's estimates of demand for the feeder service as well as additional demand estimates developed by the Project Team.*

All station plans include on-and/or off-street passenger boarding space for private shuttle services and bicycle storage facilities.

Tysons Center Remains an Important Bus Destination

Public Comment: We also note that the Center already is an important participant in the provision of transit service to and around Tysons Corner. The Center has several bus stops located on the private internal ring road of the Center between the Nordstrom parking structure and the neighboring Tycon Tower buildings located on Towers Crescent Drive. The buses that utilize this transit stop originate and terminate at various locations throughout Northern Virginia, including Arlington, Alexandria and existing WMATA facilities. We expect that these bus stops will remain active and utilized even with the extension of rail transit service, notwithstanding the additional bus service contemplated for the Tysons Corner area discussed below. (0406, 0406-L –2)

Response: *With the Wiehle Avenue Extension, the existing bus stops in Tysons Corner Center would remain in place and continue to play an important intermodal role.*

Facilities for Feeder Bus System

Public Comment: Oh yes, I forgot about LINK and metro bus in Reston. Well if you ride LINK or metro bus, no bus stop tells you when the next bus is coming, you stand in the weather because there are no covered bus stops and you don't know what bus to take to where. I think it's called a feeder system. Is the improvement of that system covered in rail costs? It has to be improved or rail won't get many riders. (0233, 0426-M –17)

Response: *The facility elements described by the commenter such as schedule information and shelters will remain the responsibility of the local transit operator, in this case, Fairfax County. All stations and stops would have bicycle racks and/or lockers adjacent to station entrances.*

B. Supplemental Draft EIS Comments

Public Comments

Clarification Regarding Premium Bus Service

Public Comment: The term "Premium Bus Service" still causes us concern. While we appreciate your email of February 17th on this subject, we still have concerns where the report speaks to this issue. We

need to fully address the concept of Premium Bus Service. The report has a limited definition on page 106, but to us this sounds very much like the service we are now providing.

Passengers will not be required to transfer to "Premium Bus Service" at the Rt. 606 station. Response should state Loudoun County is currently running service to Leesburg and that such service will continue. The wording in the Report appears to contradict your above referenced email.

"The premium bus service will replace express bus service currently run by Loudoun County into Roslyn and Downtown Washington". This is an incorrect statement. While we appreciate your email on this subject, this still needs to be corrected in the final document. (0084 6-1)

Public Comment: The Town Council appreciates the public outreach effort of the Virginia Department of Rail and Transportation on the Dulles Corridor Transportation Project. The town respectfully requests correction of error published in the draft EIS stating that premium bus service will replace current express bus service in Loudoun County. We understand from Loudoun County that the error will be corrected in the final publication and will reflect continued express bus service. (0142 6-1)

Response: The Final EIS ends the use of the phrase 'premium bus', since the service is a continuation of the existing express bus service of the two Counties and MWAA. The Project Team has recommended that until the opening of the Full LPA, the Wiehle Avenue Extension should retain this [bus] rapid transit service between Wiehle Avenue and Route 772. Where appropriate, routes would be reconfigured to optimize service to markets in the western portion of the Dulles Corridor. Loudoun County would, however, retain its current commuter service (Loudoun to Rosslyn and D.C.). Otherwise, all express bus services currently serving the West Falls Church Station will be directed to Wiehle Avenue Station.'

The operators of this bus transit service in the Corridor, which the Supplemental Draft EIS described as premium bus service, would remain the two Counties. The two Counties would provide any additional vehicles for the service, purchasing them from funding sources other than the Project. MWAA will continue to use the Washington Flyer to provide bus service between the Airport and Wiehle Avenue Station.

Retain Express Bus Service to West Falls Church

Public Comment: I wish to register my displeasure with the proposal to discontinue the express bus service between the Herndon Monroe Park and Ride and the West Falls Church Metrorail station under the Dulles Rail Proposal.

First of all, the buses that leave the Park and Ride currently are filled to capacity, more often than not with "standing room only." Assuming that the pending plan goes into effect (adding five more stops), how in the world are the vehicles expected to take on additional riders? And besides that, the plan for the rail line is to wind its way through the Tysons Corner area. Why are the bus stops, for all intents and purposes, a duplication of the areas to be serviced by rail?

The addition of an extra twenty minutes to our commuting time will be an additional burden. Having to get up even earlier than we do already is asking a lot of us commuters. In fact, right now it is just about dead even in commuting time between driving and using public transportation; the proposal to increase the daily commute by nearly four hours per week makes driving a lot more attractive. If enough citizens feel the same way, it will mean a drop in ridership (and revenue) for public transportation as well as an increase in pollution. (0143 6-1)

Public Comment: I am writing to express my dismay, and strong opposition, to the proposed discontinuation of express bus service between the Herndon-Monroe Park & Ride and West Falls Church Metro station as described in the Supplemental Draft Environmental Impact Statement, Hearing Report, February 2004 ("Report").

Thus commuters currently using Herndon-Monroe buses would have to 1) wait to board buses at Herndon-Monroe, 2) ride to the Wiehle Avenue Metro, 3) move from the bus to the Metro, 4) wait to board Metro, and 5) ride through, and stop at four Tysons Metro Stations. The existing commute between Herndon-Monroe and West Falls Church takes approximately 15-20 minutes. It is inconceivable that the proposed route of Herndon-Monroe --> Wiehle --> Tysons Corner --> East Falls Church would not considerably lengthen I would estimate that the proposed route would nearly double to 15-20 minute Herndon-Monroe to West Falls Church commute.

Of course, an alternative to such a route would entail commuters driving directly from their homes to the Wiehle Avenue Metro. This would: 1) increase traffic on the roads leading to the Wiehle Avenue station, and 2) require that the already inadequate parking at the Wiehle Avenue be greatly expanded. Such an expansion, should it occur, would have to be a multi-level garage in order to accommodate the diversion of riders from Herndon-Monroe to Wiehle. And of course, the Herndon-Monroe garage would be vastly under-utilized and result in a huge waste of resources.

If Metro were extended all the way out to Herndon-Monroe, then the proposed elimination of the express bus service between Herndon-Monroe and West Falls Church would make sense. Absent such extension, the proposal promises nothing but additional hassle for commuters. (0144 6-1)

Response: *The Project Team has not stated that the travel time would increase by 20 minutes. The express bus service from Herndon-Monroe to Wiehle Avenue Station has been designed to be a very high frequency shuttle to Wiehle Avenue for those drivers who will not be able to find a park-and-ride space at Wiehle Avenue Station. The intent is to make Herndon-Monroe a viable satellite facility through the provision of a very convenient shuttle service providing direct service into Wiehle Avenue Station pavilions.*

The travel times for passengers that currently travel on the existing Fairfax Connector 980 service from Reston East (Wiehle Avenue) would be roughly similar to that of traveling by Metrorail from Wiehle Avenue Station to East Falls Church Station under the Wiehle Avenue Extension. For passengers that currently depart from Herndon-Monroe, it is expected that the travel time from Herndon-Monroe to East Falls Church would increase by approximately 2 minutes under the Wiehle Avenue Extension.

Public Comment: Local officials must also make sure that the planning includes internal circulation systems that work with the transit stations. We also urge that a feeder system be strongly considered as an integral part of this. The stations must be considered and designed that future expansion of the feeder-bus access can be readily implemented. (0067 0075-3)

Response: *An integral part of the project development will be the continued examination of the feeder bus systems serving specific stations. .*

Public Comment: Kiss & Ride drop-off points must be a part. Potential conflicts between feeder buses, cars and pedestrians must be minimized. Exclusive feeder-bus access lanes should be developed within at least a half a mile of station sites. (0067 0075-4)

Response: *Comment Noted. The facility elements identified by the commenter have been considered in stations plans and will continue to be developed during preliminary engineering.*

Public Comment: In the future, some form of grade-separated internal shuttle bus, people-mover system, is possible in order to help provide quick access within these urban centers. (0067 0075-5)

Response: *These types of improvements are not proposed as part of the Project and would be the responsibility of the local jurisdictions.*

Allow Express Service from Dulles Airport to Tysons Corner

Public Comment: Planning should also allow for express service between the Dulles Airport and Tysons Corner, thereby alleviating the conflict of rush-hour congestion and airport service. (0441, 0441-E –9)

***Response:** Express services between Dulles Airport and Tysons Corner was never a consideration among the alternative modes, their alignments and operating plans. The Locally Preferred Alternative is a Metrorail Extension with intermediate stations between Tysons Corner and Dulles Airport.*

Dulles Airport Growth Impacts

Public Comment: Impact of the Growth of Dulles International Airport (DIA) was not adequately documented nor was the impact of the anticipated passenger growth and commercial vehicular trips presented. It is recognized that the DIA represents an economic engine in the Dulles Corridor. Such economic engines have both a positive, as well as negative impact on the surrounding area. This impact needs to be documented and assessed. For example, the current projected passenger growth by the year 2020 may extrapolate to as many as 73.4K passengers per day transiting to and from DIA. Of that number, a portion may be expected to use a Dulles Corridor Rapid Transit facility (DCRTF). (See Attachment A.) (0427, 0427-E –3)

***Response:** The Project Team utilized a specific model that was developed during the original Dulles Corridor Transportation Study and refined for this Project for the forecast of Metrorail trips to and from Dulles Airport. Air passenger growth was factored into the forecasts. The model used was based on air passenger survey data collected at all three Washington airports by MWCOG and trips were estimated by all modes of arrival. The Dulles Airport forecasts are based on an extrapolation of the experience at National Airport because National Airport is the only regional airport with Metrorail access.*

Foster Transit-Oriented Development and Travel Demand Management

Public Comment: We need to assure that transit investments in the corridor will be accompanied by rapid investment to foster transit oriented development, walkable and bikeable neighborhoods around transit, high quality European and Japanese style bicycle access to transit throughout the corridor with Bikestations like those in California and bike paths leading to the stations, and appropriate incentives in the corridor that reduce the oversupply of free and subsidized car parking and encourage employer-provided transit benefits. (0444, 0444-E –7)

Public Comment: A wide variety of parking and travel demand management actions can and should be taken to foster transit use, reduce station area congestion, and achieve other private and public sector objectives related to transit development. Numerous examples of what can be achieved through such efforts exist around the country; however, there are few examples of success in Northern Virginia. Normally actions in these areas are left to the private sector or are limited to isolated public sector decisions, such as the establishment of one set of parking prices region wide by Metro. Fairfax County should take the lead in establishing a task force to investigate options for a more ambitious and comprehensive approach, involving community groups, property owners, major employers, and others. One particular component of a plan that should come out of such an effort is a set of rational parking prices in the station areas that would be designed to limit auto congestion in the station areas, assure the availability of some parking spaces at all hours, and create opportunities for the private sector to reduce its parking costs, reduce parking subsidies to employees, and create revenues from for-profit transit parking operations. Such parking prices and their impacts should be continually monitored to assure that these objectives are being achieved. (0478, 0484-E –17)

***Response:** Transportation demand management (TDM) is a useful tool for dealing with issues related to transportation, land use, economic development, and environmental quality in an urban context. TDM can be used to manage the transportation system better, which would increase*

mobility, and reduce pollution. TDM can also be used to mitigate negative consequences of development, most particularly increased traffic congestion and air pollution, while perhaps encouraging additional development to occur through the avoidance of traffic gridlock, if, when, and where TDM is implemented properly. Some employer-based TDM strategies, such as carpool/vanpool incentives, parking management, financial/time incentives, and information and marketing could also greatly reduce single occupant vehicle (SOV) traffic volumes.

The Fairfax Countywide Trails Plan and the Loudoun County Trails plan were consulted to determine future planned improvements to pedestrian and bicycle facilities. As part of the Project, pedestrian and vehicular access will be provided to each station from the nearest public rights-of-way. All other planned pedestrian and bicycle trails fall under the jurisdiction of the City of Falls Church, the Town of Herndon, Fairfax and Loudoun counties and VDOT. All stations would have bicycle racks and/or lockers adjacent to station entrances.

Potential Impacts of Telecommuting and Slug Commuting

Public Comment: How could technology - especially electronic technology, such as telecommuting - be used to reduce the need for travel in the corridor? (0235, 0235-E -4)

Public Comment: How could "non-traditional" transit such as the encouragement, and construction of parking, for "slug" commuting be used to reduce corridor travel? (0235, 0235-E -5)

Response: Telecommuting can be used to reduce overall commuting and is promoted as an alternative to commuting. However, it would contribute only a fraction of the travel demand reduction needed within the Dulles Corridor to meet future commuting demands.

Accommodate Intra-Reston Traffic

Public Comment: By 2005, we need to reserve aboveground for Reston, intra-Reston traffic to maintain our quality of life around the station areas. (0170, 0170-T -12)

Response: Comment noted.

Travel Demand Management Strategies Needed

Public Comment: Finally, I would like to point out that they say that transportation demand management strategies can make a significant difference. That's something Fairfax hasn't done very much of, but that will help mitigate the traffic congestion that will occur at the station areas. They include some recommendations in the plan, but they say once a Locally Preferred Alternative is selected, they will go back and develop far more detailed transportation demand management strategies. (0141, 0167-T -6)

Response: Transportation demand management (TDM) is a useful tool for dealing with issues related to transportation, land use, economic development, and environmental quality in an urban context. TDM can be used to manage the transportation system better, which would increase mobility, and reduce pollution. TDM can also be used to mitigate negative consequences of development, particularly increased traffic congestion and air pollution, while perhaps encouraging additional development to occur through the avoidance of traffic gridlock, if, when, and where TDM is implemented properly. Some employer-based TDM strategies, such as carpool/vanpool incentives, parking management, financial/time incentives, and information and marketing could also greatly reduce single occupant vehicle (SOV) traffic volumes.

Public Comment: How can the demand for transit along the corridor be reduced? (0235, 0235-E -2)

Response: Demand for transit can be reduced by providing poorer service (less frequent service, less direct service), building residential and commercial areas at very low densities, and making access to transit difficult (i.e. no sidewalks, poorly designed and maintained bus stops, and poor

access to park and ride lots). It should be strongly noted that this is contrary to every goal and objective of this project.

Better Headways on the Orange Line

Public Comment: The number of Blue line trains going to DC from Rosslyn needs to be decreased to allow better headway on the Orange line. (0043, 0043-CC-5)

Public Comment: The proposed routing of Dulles Rail trains on the Orange Line from East Falls Church to Stadium Armory seems wise & will increase the core capacity of the most used portion of the 103 mile Metrorail system. However, the re-routing of Blue Line trains to cross the Potomac near the 14th St. Bridge would sever the metrorail link between Rosslyn and the Pentagon. (0066, 0066-CC-4)

Response: *Re-routing of one-half of the Blue Line trains along the Yellow Line rather than through Rosslyn has been identified in the WMATA Core Capacity Study and Capital Improvement Plan as a possible means of increasing Orange Line service reliability but not frequency. This strategy has been incorporated into the Metrorail operating plans used to prepare the Final EIS.*