ED/T&E COMMITTEE #1
April 29, 2015
Worksession

MEMORANDUM

April 27, 2015

TO: Education Committee
Transportation, Infrastructure, Energy, and Environment Committee

FROM: Essie McGuire, Senior Legislative Analyst
Glenn Orlin, Deputy Council Administrator GO

SUBJECT: **Worksession – FY16 Operating Budget, Department of Transportation, Non-Public School Traffic Mitigation Program**

Today the Education (ED) Committee and the Transportation, Infrastructure, Energy, and Environment (T&E) Committee will review the County Executive's recommended FY16 Operating Budget funding for the non-public school traffic mitigation program. The following individuals are expected to participate in today's worksession:

- Al Roshdieh, Acting Director, Department of Transportation (DOT)
- Carolyn Biggins, Chief, Division of Transit Services, DOT
- Todd Watkins, Director, Department of Transportation, Montgomery County Public Schools
- John Matthews, Consultant

On March 3, the Council approved a supplemental appropriation to the FY15 Operating Budget for the Department of Transportation totaling $240,560 for a pilot program to provide transportation to non-public schools. The program was started in September 2014 and continues through the current school year. The stated intent of the pilot was to reduce traffic associated with parents driving their children to the non-public schools. The supplemental appropriation provided funding for the current year pilot. Of the total amount, $196,750 was for direct bus transportation costs and $43,810 was for evaluation of the pilot and traffic counts. Fees paid by the non-public schools also contributed additional offsetting revenue of $43,285.

The pilot program used Montgomery County Public School (MCPS) buses during the times that the buses were not running their regular routes to provide transportation for six non-public schools. The pilot program covered the marginal cost of the MCPS bus operator extra duty time and assumed that the non-public schools would contribute 22% of the cost and that County funds would support the remaining 78% of the cost.

The Executive's recommended FY16 Operating Budget for DOT includes $659,973 to continue and expand this program into the next school year. However, earlier this year the Board of Education approved a change to the MCPS bell times, requiring extensive changes to the MCPS bus route times. **As a result it is no longer feasible for this initiative to rely on MCPS for non-public school transportation within its current route and bus operational capacity.** At this time Executive staff is working on an FY16 plan to incorporate private charter bus operators, which significantly increases the cost. The operational details of what schools, routes, and cost sharing practices would be feasible are still in development.

The FY15 appropriation included funding for an evaluation of the pilot program. The draft report of the first year pilot is attached. Executive staff indicated that the report is still in draft form because the steering committee for the pilot effort has not reviewed and finalized the report; however, Executive staff did approve including the draft report for the Committees' information for today's worksession.

In determining what level of funding should be provided for this initiative in the next school year, Council staff raises 3 primary questions.

1. Is this a priority use of public funds?

Traffic mitigation. The stated purpose of the pilot program was to reduce traffic congestion caused by parents driving to non-public schools. If the program has had an effect on mitigating traffic it would be at those intersections closest to the schools. The effect on intersections depends upon the traffic generated in the peak hour and the distance from the site. The Subdivision Staging Policy uses the following rules for applying Local Area Transportation Review (LATR, the intersection adequacy test) on proposed developments. Generally, each LATR study examines the number of signalized intersections in the following table. Any traffic added at an intersection beyond this range is considered to have an insignificant impact:

Maximum Peak-Hour Trips Generated	Minimum Signalized Intersections in Each Direction
< 250	1
250 – 749	2
750 – 1,249	3
1,250 – 1,750	4
1,750-2,249	5
2,250 – 2749	6
>2,750	7

None of the pilot schools generate as many as 750 peak-hour trips in the morning or afternoon. Therefore, if any of the pilot schools were proposed developments, the LATR study would not look at more than 2 signalized intersections in each direction. The table below shows, for each pilot school,

which intersections among the 50 most congested in the County are within two signalized intersections of the school. The times when the intersections have congestion that exceed its standard are in **bold**:

School (bus trips)	Intersection	AM CLV	PM CLV	CLV Standard
Berman (9)	Aspen Hill Rd/Arctic Avenue	**1609**	1457	1475
Torah (8)	Georgia Avenue/Seminary Road	1520	**1624**	1600
Yeshiva (3)	Georgia Avenue/Seminary Road	1520	**1624**	1600
St. Francis (2)	None	N/A	N/A	N/A
St. Jude (2)	Veirs Mill Rd/Twinbrook Pkwy	1426	**1721**	1550
Norwood (2)	None	N/A	N/A	N/A
Mary of Nazareth (1)	None	N/A	N/A	N/A

Not all of the afternoon buses serving these schools travel through these intersections during the peak hour. Of the 27 morning and afternoon bus trips, only 7 of them pass through a single intersection when that intersection would be considered congested:

- 4 bus trips/day serving the Berman School at 7:45 am;
- 2 bus trips/day serving the Torah School at 5:15 pm; and
- 1 bus trip/day serving the Yeshiva School-Girls Division at 5:35 pm

Traffic mitigation—that is, taking steps to reduce vehicular traffic—has been undertaken by the County in two ways. One way is to require it of a proposed development (usually, a non-residential development) which would otherwise generate enough traffic at one or more intersections where the congestion standard would be exceeded or would require an intersection widening that would be deleterious to the pedestrian environment. The aforementioned LATR test is used to evaluate the likely effect of such mitigation measures: operating shuttles, buying down transit fares, limiting parking, etc. The other is to use public funds to encourage alternative transportation (i.e., anything but driving), by educational campaigns, direct marketing to employers, and even buying down transit fares. In both cases, however, the *traffic mitigation efforts are targeted to those areas where congestion is most prevalent: where employees are concentrated.* That is why Transportation Management Districts (TMDs) have been operating much of the past 15-25 years in Silver Spring, Bethesda, Friendship Heights, and North Bethesda/Rockville (including White Flint and Rock Spring Park), and more recently in Greater Shady Grove.

Should subsidized private school transit be a policy goal? At the Council's public hearing, many parents expressed appreciation for the convenience and improved quality of life experienced by having transportation provided for their children to school. While Council staff can appreciate the benefit of reduced logistical difficulties for busy families, this may not be a public policy goal that would justify a significant expense without some additional public benefit.

Council staff believes there are two rationales for taxpayer funds to be used for subsidizing public transit. One is that, to the degree that commuters are drawn out of their cars and into transit, carpools, and vanpools, or bike, walk, or telecommute, then congestion is less than it would otherwise

be. In other words, every commuter stands to benefit, regardless of the mode of commutation. The other rationale is to provide transport for those who either cannot afford to drive (or even have a car that is available for the trip) or is disabled and would otherwise be unable to make the trip at all.

Some who testified in favor the pilot, and of extending it to 2015-16, point out that the subsidy per student trip during 2014-15 amounts to far less than the per-trip subsidy than for Ride On. Because the pilot was able to take advantage of the ready availability of school buses, the marginal cost of providing the service was small; with the changes to the bell times that cost of providing the same service with private bus contractors will certainly be much higher. But this still misses the point, which is should *any* County tax dollars be used to subsidize the rides of a few students. As demonstrated above, there is no substantive traffic mitigation benefit for the general public. And generally the individuals served by this subsidy are neither low-income nor, as a rule, disabled.

The affordability issue is important. Ride On is available to the general public, of course, but its predominant ridership base earns a low-to-moderate income. The Title VI review of Ride On (to be reviewed by the T&E Committee later this afternoon) reports that 76% of its ridership has a household income less than $50,000, and 55% has a household income less than $30,000. Information about the income of the households in the pilot is not available, but a relevant factor is the annual tuition and fees paid for each student:

School	Annual Tuition and Fees
Berman	2015-16: $14,850 (Grades K-5); $18,270 (6-8); $21,700 (9-12)
Torah	2014-15: $14,575 2015-16: $15,000
Yeshiva	2014-15: $17,500 (Grades 7-8); $19,875 (9-11); $20,025 (12) 2015-16: $17,950 (Grades 7-8); $20,400 (9-11); $20,550 (12)
St. Francis	2014-15: $8,150 2015-16: $8,150
St. Jude	2014-15: $6,995 (Catholic); $8,300 (non-Catholic) 2015-16: $7,170 (Catholic); $8,510 (non-Catholic)
Norwood	2014-15: $28,615 (Grade K); $29,475 (1-2); $30,415 (3-4); $33,690 (5-8) 2015-16: $28,895 (Grade K); $30,065 (1-2); $31,175 (3-4); $34,830 (5-8)
Mary of Nazareth	2014-15: $6,625 (Catholic); $7,625 (out-of-Diocese or non-Catholic) 2015-16: $6,800 (Catholic); $7,800 (out-of-Diocese or non-Catholic)

The County provides a subsidy program for low-income seniors and persons with disabilities, the Call-N-Ride program. This program subsidizes taxi service and operates on a sliding scale of income eligibility. The income eligibility levels were raised in FY15 and the same level is proposed again in FY16. For this program, a person earning less than $14,000 per year receives a 91% subsidy, and the maximum County subsidy of 50% is for individuals earning between $26,932 and $32,499 per year. Again, the non-public school pilot was structured with a County subsidy of 78%. The subsidy policies for these existing County services further illustrate the question of whether families choosing to attend and afford non-public schools should receive such a large County subsidy for transportation, if at all.

2. **Can a subsidized non-public school transportation program be administered fairly and remain feasible?**

In its pilot year, the transportation was offered to private schools on a highly individualized basis. Factors included whether the routes and times could be accommodated within the MCPS routes and capacity as well as the schools' interest in participating. While this may be reasonable for a pilot effort, a publicly funded program would need to be offered equally to any interested school or at least be offered on the basis of clear, consistent, and justified criteria for eligibility.

There are over 200 non-public schools in Montgomery County with an estimated student population of 35,000. The two school cost structure identified in the report estimates a cost of $81,000 per bus. If this cost was applied to all 200 schools it would cost $8.1 million to provide non-public school transportation. Even acknowledging that most models would cost less per bus if fully implemented to scale, this represents a significant investment of public dollars. Capacity to obtain, maintain, and house a bus fleet to meet this population would be an important consideration as well, particularly in light of the ongoing discussions about the relocation and overcapacity of existing MCPS bus depots.

Some non-public schools provide their own transportation already, even if limited; two of the six schools participating in the pilot this year had some transportation in place prior to the County's subsidy. If the County begins a program of subsidizing non-public school transportation, it could very likely be in a position of subsidizing existing efforts rather than expanding new efforts.

Council staff is very concerned about expansion or continued implementation of a program that subsidizes transportation for select non-public schools without clear policy structure in place and without clear understanding of the implications of taking that policy to scale. Each year that the County provides any degree of subsidy or service sets precedent and expectation for current and possible future participants.

3. **Are there more equitable options to support private school transportation needs with less cost exposure to the County?**

The report identifies many strategies to work with non-public schools to share resources and make improved commuting connections. These include partnering non-public schools with similar geographic patterns to reduce the cost of existing or new transportation; contract with church based and nonprofit organizations that have small bus fleets in proximity to non-public schools; and making greater use of the existing MCPS practice of taking non-public students on existing routes with capacity at the family's request. The report also notes that the non-public schools do not have the time, expertise, or infrastructure to make these connections and form transportation strategy on their own.

Council staff fully appreciates the work that has gone on to date to form these partnerships and connections, to think creatively and to problem solve around this complex issue. Council staff agrees with the report's assertion that many opportunities exist to support and expand current non-public school transportation capacity. The report contains the conclusion that "The County's role in this effort should

continue by providing the analysis, organization, and brokering functions that will build on the momentum and interest in the non-public school community" (circle 4).

In Council staff's view, this brokering and coordinating function is the most appropriate first step if the Council supports non-public school transportation as a public policy goal. Council staff further suggests that an outright subsidy program could inhibit the efforts to develop these creative partnerships and coordination efforts.

Council staff notes that the County Executive recommended funding for a community grant of $35,000 to the Jewish Federation of Greater Washington. An excerpt from the grant application is attached on circle 40. This grant request is to coordinate transportation services among the Jewish Federation's partner agencies, and the proposal specifically references working with the County's pilot public/private school transportation program. This grant would duplicate the coordinative approach for the County as described in the report. **If the Council approves either Option 1 or Option 2 below, it should not fund this $35,000 request.**

Council Staff FY16 Operating Budget Recommendation

Appendix 6 of the report outlines a proposed and modified cost plan for FY16 funding (circle 35). This plan assumes a cost of $106,160 for 6 months of continued work by the consultant and $115,000 for 9 months of a permanent position in Transit Services to assume supervision of the program. This plan allows for three months of overlap between the consultant and the new position. In the funding options Council staff outlines below, Council staff assumes instead 4 months of continued work by the consultant ($70,670) to allow for a one month overlap transition with the new position.

Council staff suggests the following options for consideration for FY16 funding.

Option 1: Fund only the consultant and position to facilitate transportation coordination initiatives among non-public schools. Funding for this option would total $185,670, a $474,303 reduction from the Executive's proposed funding level. This option would build on the low-cost and no-cost options described in the pilot evaluation report to maximize existing transportation resources and reduce costs to non-public schools of expanding those transportation options for parents. These positions can also refine the policy issues that would need to be addressed if the initiative were to expand again to include direct County provision or subsidy of non-public school transportation. If the Committees recommend this option, Council staff recommends that the six schools currently receiving transportation be the initial focus of the coordination efforts to transition them to a new service model.

Option 2: Fund the consultant and position for the facilitation efforts described in Option 1 and provide the same dollar level of subsidy provided in FY15 to transition the private schools currently receiving services to a new coordination model. Funding for this option would total $382,420, a $277,553 reduction from the Executive's proposed funding level. The subsidy level assumed in this option is the $196,750 approved in FY15. If the Committees recommend this option, DOT would need to work with the current six schools to determine a service and cost structure for the

next year within the available funding level. Council staff cautions that if the Council funds continued subsidy of any kind in the next year it should be made clear to the non-public school participants that the subsidy may not continue past FY16 and that a new program model will be developed – possibly without a subsidy – in the following year (FY17).

Council staff recommends Option 1.

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REPORT ON NON-PUBLIC SCHOOLS TRAFFIC MITIGATION PILOT

Analysis of First Year Pilot Program
DRAFT

Prepared for Montgomery County Department of Transportation,
Isiah Leggett, County Executive, Chuck Short, Special Assistant to the County Executive

Contents

Executive Summary

In January of 2014, Montgomery County Executive Isiah Leggett, commissioned a study of the transportation practices of parents and students attending the County's non-public schools as **a peak hour traffic mitigation project.** Approximately 35,000 students attend Montgomery County's non-public schools, and many of these students arrive by individual car or small carpools. Reducing the use of single-passenger transportation through increased use of buses is an important strategy that holds great potential for reducing traffic congestion on Montgomery County roadways during peak traffic periods.

Six non-public schools were initially selected to participate in the first year pilot. The purposes of the study and pilot were to determine the feasibility of a traffic mitigation program, as follows:

- Evaluate the interest in making use of bus service by non-public schools, their students, and parents
- Provide bus service to a sample of non-public school students
- Analyze available transportation resources and assess comparable strategies for mitigating traffic congestion that may be relevant to non-public schools
- Develop models for delivering efficient bus service to non-public school students in the future
- Identify options for a collaborative management program that makes best use of all transportation resources among non-public schools to create the most effective County-wide transportation model

Tremendous interest and enthusiasm in participating in this program was expressed by non-public school administrators and parents. Several schools expressed interest in participating beyond those chosen for the pilot. Of the schools in the pilot, success was greatest when service could be provided at the time closest to the bell schedule of the school.

Program effectiveness was judged using several measures:

- Traffic relief at congested intersections and roadways detailed under individual schools in the report was broad-based
- Interest and participation by parents, schools and students was significant
- Cost of providing service compared favorably to MCPS cost per student ride and Ride-On cost per passenger

More work must to be done to establish the means for gathering data on the effectiveness of the program and developing appropriate measures. Surveys and other measures are needed to fully understand the commuting patterns of non-public school parents some of whom make four or more trips by car per day.

Only Montgomery County Public Schools (MCPS) buses were used to provide transportation on a cost recovery basis during the first year of the pilot since no purchasing process was in place to procure services from other sources. MCPS bus availability was limited and there was more interest than there were buses to serve. The first year pilot program operated with exceptional economies. No buses were purchased, no employees were hired, and no significant overhead costs were incurred and the program

operated very successfully on a modest budget. The MCPS model provided an excellent platform for inexpensively exploring initial interest and potential for success of the program. These economies had a significant positive impact on the first year of the program and contributed greatly to holding down costs.

Approximately 3000 non-public school student trips were provided each week with a $1.98 (administrative costs excluded) average cost per ride. Each of the schools established individual cost structures for their school community and costs were shared by the County (78%) and the school or parent (22%). This cost structure is based on the County's public transit model. At this price point, parents and schools demonstrated a willingness to participate.

The change in bell times next fall will have a significant negative impact on the program. Gaps in MCPS bus runs that coincide with non-public school transportation needs were used to provide services. This change greatly reduces the opportunities for MCPS participation leaving very few bus trips in the original pilot group available next year. The bulk of service will now need to shift to other means.

Moving forward, the first year pilot program clearly demonstrated or identified the possibilities for making better use of existing services and improving coordination among an array of providers with a **centrally planned or managed approach.** With a 35,000 student non-public school population, many opportunities exist for mitigating traffic in high congestion areas through improved school transportation management. Plans for securing services from private carriers and for finding other creative means to provide bus service to schools were examined extensively. Each additional school visited during the first year revealed new opportunities for sharing resources and making improved commuting connections. Many opportunities are identified in this report that could enable schools with small bus fleets to share resources with schools without transportation plans. Partnerships between schools and private carriers would lead to reduced costs, expanded ridership, and more efficient transportation plans.

More time is needed to develop operating agreements, resolve contractual issues, establish rates, and implement plans with a collaborative and shared strategy involving the County, MCPS and private business partners. The non-public schools lack the resources to pursue a comprehensive transportation management plan independently. County-based management with transportation expertise is essential to the success of the program.

Continued innovation and leadership is needed to make these complex transportation connections. The County's role in this effort should continue by providing the analysis, organization, and brokering functions that will build upon the momentum and interest in the non-public school community.

The benefits of a comprehensive transportation management approach are clear. The efforts of this traffic mitigation initiative would benefit all residents of the County and are outlined in this report.

Introduction

Traffic congestion is a significant problem for Montgomery County. As the population and employment continue to grow, even more traffic is expected. The County and state have several high impact strategies in the planning stages such as the Purple Line, Corridor Cities Transit and Bus Rapid Transit systems, but they are years and billions of dollars away from completion. The County has implemented several innovative steps to respond to traffic congestion including the Bike Share program, new Ride On services, intersection improvements, targeted youth and senior fares on Ride-On and other public transit promotions, and improved pedestrian and bike ways. No one of these initiatives solves the problem, but each contributes incrementally to improvement.

Approximately 35,000 students attend Montgomery County's non-public schools, and many of these students arrive by single passenger car or small carpools. Reducing the use of single passenger transportation is an important strategy for relieving traffic congestion on Montgomery County roadways during peak traffic periods. Consideration should be given to all strategies designed to relieve traffic congestion throughout the County and improve the quality of life for residents.

In January of 2014, the Montgomery County Executive commissioned a study to provide public transportation to non-public school students to reduce traffic congestion during peak hours. Six non-public schools were selected to participate in the pilot during the 2014-15 school year. The purposes of the pilot and study were as follows:

- Evaluate the interest in making use of bus service by non-public schools, their students, and parents
- Provide bus service to a sample of non-public school students
- Analyze available transportation resources and assess comparable strategies for mitigating traffic congestion that may be relevant to non-public schools
- Develop models for delivering efficient bus service to non-public school students in the future
- Identify options for a collaborative management program that makes best use of all transportation resources among non-public schools that creates the most effective County-wide transportation model possible

Through interviews with participating school administrators, meetings with parents, and analysis of ride data, it was determined that there is sufficient interest among parents of non-public school students in using transportation alternatives other than single car trips, provided that the service is delivered at times needed and at a reasonable cost. While some non-public schools already provide transportation services, ridership is often limited if these criteria are not met. For example, two of the non-public schools in the pilot study either owned their own small bus fleet or contracted with a private carrier in

the area to provide student transportation. In both cases, the costs for transportation, paid by the parents either directly as a charge for use of service or through funds appropriated to support the transportation program by the school, were extremely high, and participation was very limited. When the pilot was introduced with more reasonable cost factors, ridership soared.

The following factors contributed to the successes of the pilot program:

- Where MCPS bus routes fit with non-public school needs, services were extremely attractive to schools and parents
- The MCPS low cost fee recovery rates for the program were exceptionally affordable especially in the mornings when there was no hourly charge
- Where students resided in highly concentrated areas, ridership counts were higher and buses were more efficiently utilized
- The subsidy provided by the County made the cost of a ride very reasonable
- Parents welcomed the opportunity to put students on buses and avoid added commute times and driveway/roadway backups at schools, and enhance the safety of their children
- When service was at the desired time and pickup/drop off location, parents and students embraced the opportunity to use buses

During first semester of the pilot, transportation was provided to students at six non-public schools using Montgomery County Public Schools (MCPS) buses during periods of time when they were not otherwise in use for MCPS students. While the pilot effectively provided approximately 3000 student trips per week, the decision by MCPS to delay bell times by 20 minutes in the fall of 2015, limits the feasibility of replicating the pilot program on a larger scale, as described below. This report proposes alternative transportation strategies and puts forward models for diversified bus service plans for implementation during the second year of the pilot.

Pilot Program Year One—Overview

Study Phase

Several models for addressing traffic congestion by reducing single car trips to non-public schools were considered:

- Use of MCPS buses during periods when not used by MCPS schools
- Creation of an independent bus system, either privately or publicly owned
- Increased use of current private carriers with a planned approach
- Expanded use of Montgomery County Ride-On buses
- Increased use of bus fleets currently owned and operated by non-public schools to serve other non-public schools

The method that surfaced as the easiest to implement was the use of MCPS buses for two primary reasons. First, resources (buses and drivers) in many cases were already in position serving MCPS

students at the time and place of need. Second, the relationship between the Montgomery County government and MCPS afforded a more simple agreement process which enabled a speedy start. Most of the other options required a lengthy and complicated procurement process which would have delayed the implementation of the pilot by many months. With one exception, MCPS emerged as the sole provider of services during the first year of the pilot.

During the study phase of the pilot program, staff researched the needs of the non-public school community and other factors relevant to the program. Issues analyzed included:

- Level of interest a family might have in a transportation program for their school
- Transportation plans used by families
- Acceptable distance a family might travel to meet the bus
- Length of acceptable ride times
- Methods used to combine rides if any (carpools, vans, etc)
- Cost of methods currently in use if available (fees paid to ride with other parents or buses)
- Areas from which families enrolled students in their programs
    - Proximity of student's residence to school
    - Other transportation factors that impacted their school community such as
        - Traffic in the immediate area of the school site
        - Traffic mitigation requirements imposed by Montgomery County Government through the permitting or special exception process
- Acceptable pricing and cost structures for parents and schools

Even after participants were selected, ongoing study of non-participating schools continued throughout the first year of the pilot.

Participant Selection

Six schools were originally selected to participate in the pilot study. Prior to selection several schools were considered. Selection was based on criteria that included: location of school within an area experiencing traffic congestion during peak hours; interest in exploring bus service; proximity of students' residences to the school; concentration of students within a geographic area; current or past experience within the school community of using bus service; and school start and end times complementary to MCPS bell times. Of the original six, one school, St. Bernadette School in the Four Corners area of Silver Spring was dropped because they had a high percentage of students living within a mile of the school and were replaced by St. Jude Regional Catholic School in the Rockville area. Plans for Our Lady of Good Counsel High School in the Olney area never materialized because of issues of incompatibility with the program goals. Later, after-school service at the Norwood School in Potomac was added starting in January 2015 and on March 30, 2015 service to a seventh school, Mary of Nazareth Catholic School in the Seneca area of Darnestown, began.

None of the plans implemented were intended to serve 100% of the school community in any setting. Instead, service was provided when and where there was a good fit between what was available and

what was desired and where it was thought there would be sufficient ridership to have a positive impact on traffic congestion.

For example, many Jewish families reside in close proximity to their neighborhood synagogues. This factor provides a beneficial arrangement for establishing an efficient transportation plan because very little time is required to travel from neighborhood to neighborhood to collect students for transport to schools. Dissimilarly, students attending other parochial schools (e.g., Catholic or Episcopalian) and secular schools do not typically live very close to one another, and school catchment areas are extensive. Under the plan utilizing MCPS buses, providing bus service to schools where students do not live in close proximity proved to be significantly more challenging. Since the morning period of time available to take students to schools on MCPS buses was very limited, each route could only make one or two stops. The time required to travel to school from student homes was limited to approximately fifteen minutes which then allowed the bus to return to the home area to perform its next trip to an MCPS elementary school. This worked well for the Jewish schools in the pilot, but was problematic and limiting in the other schools because of their large catchment areas.

Program Startup

Following the initial study phase, a short two week mini-pilot program was initiated in June 2014 with one school. The success of this pilot demonstrated inexpensive solutions to achieving the goals of the program were possible. Parent responses indicated the need for, and a very strong interest in the program.

During the summer of 2014, pilot schools sought to determine if parents in their respective school communities would be interested in participating if transportation services were available to them. Since cost factors had not been determined, it was difficult for school administrators to get firm commitments from parents since they were unable to quote exact costs when inquiring about interest. Hence, many parents stated interest but were reluctant to sign up and went about establishing individual plans for the year which included:

- Making plans to organize carpools and designate driving days
- Adjusting work schedules to accommodate self-transportation plans
- Purchasing mini-vans to accommodate additional riders
- Making other long-term commitments that restricted participation in the pilot

In anticipation of a transportation program startup occurring with the first day of the 2014-15 school year, some of the pilot schools began in good faith to collect money for transportation expecting service would be available. Additionally, one of the pilot schools was working around a larger plan that incorporated a significant expansion of their existing bus plan in combination with the expectation of added resources provided by the addition of MCPS bus routes to their program. In this specific case, attempting to establish two possible plans for the upcoming school year became confusing and difficult to define for parents.

Toward the end of the 2014 summer, County officials determined that the program would be subsidized based on public transit models. Work was completed to provide the schools with proposed routes and stops which included the estimated costs for each of the routes planned for the schools. Once the cost structure had been established, schools were better able to communicate expectations to parents. It is believed however, these late summer developments had a significant negative impact on participation.

With the start of the school year in September 2014, modest transportation services were initiated to serve five of the six schools in the pilot program. These services relied completely on the use of MCPS buses at periods of time when they were not otherwise in use. After-school service began with the start of the school year while morning service was delayed until October or later to assure no MCPS resources were being committed that were in conflict with the needs of public school students and in order to guarantee the needs of MCPS students were placed first.

Pilot Program Services Described by School

A brief description of the services provided to each of the schools in noted below. Lists of most congested roadways and intersections appear in the appendix section of this report. These locations noted were identified in the Montgomery County Planning Department's *Mobility Assessment Report* (Staff Draft) dated April 2014 and appear at the end of each section summary chart.

Melvin J Berman Hebrew Academy-Arctic Avenue, Aspen Hill

Bus Service Provided 4 buses at 7:45 Monday - Friday 3 buses at 4:30 Monday-Thursday 2 buses at 5:30 Monday-Thursday	
Student Enrollment	630
Number of Student Trips per week	1413
After-school programming provided by school?	Yes
Did the school previously provide transportation?	Yes (limited door to door)
Most Congested Intersections positively impacted by this pilot: • #7 Georgia Ave at 16th St • #10 Rockville Pike at First St/Wootton Pkwy • #18 Randolph Rd at Viers Mill Rd • #22 Montrose Rd at Tower Oaks Blvd • #36 Aspen Hill Rd at Arctic Ave (a half block from the school)	
Most Congested Roadways positively impacted by this pilot: • #15 MD 586 Kensington Wheaton (A.M.) • #16 MD 355 Rockville (A.M.)	

After-school transportation services were first to begin with the start of the new school year. Three 4:30 buses and two 5:30 buses were needed to transport students primarily to the Kemp Mill, Rockville and Potomac areas. Afternoon buses run four days a week. Buses do not run on Fridays due to early

dismissals that do not meet the requirements of the program for peak travel times. Morning service began early in October and made use of three buses from the Kemp Mill area and one bus from the Potomac area. (Potomac morning bus service began with two buses but was reduced to one due to underutilization.) This was probably the best utilized group of buses in the pilot program. Approximately 1413 student trips occurred weekly on 44 bus trips with an average ridership of just over 32 students per trip.

In addition to the students and routes noted above using MCPS buses, the Berman academy redeployed the five routes they had been operating prior to the pilot and added 375 student trips on their own buses . Students who rode the Berman buses paid the same fee as those riding the MCPS buses and were picked up at neighborhood corner stops. Students who rode Berman buses prior to the pilot program were given the option to continue to be picked up at their doorsteps for a considerably higher charge. Berman therefore, incorporated both types of service into their transportation plan.

The Berman Academy devoted a tremendous amount of effort to planning and organizing this transportation program. They had previous experience running their own small fleet of buses. Additionally, the school community had an opportunity to experience the two week pilot at the end of the previous school year which demonstrated a tremendous interest from their community.

The Torah School of Greater Washington -Linden Lane, Silver Spring

Bus Service Provided 3 buses at 7:50 Monday-Friday 3 buses at 4:15 Monday-Thursday 2 buses at 5:15 Monday-Thursday	
Student Enrollment	385 (Includes All Linden Lane Students)
Number of Student Trips per week	820
After-school programming provided by school?	Yes
Did the school previously provide transportation?	No
Most Congested Intersections positively impacted by this pilot: ▪ #22 Montrose Rd at Tower Oaks Blvd ▪ #27 Colesville Rd at Dale Dr ▪ #32 Georgia Ave at Forest Glen Rd ▪ #33 Colesville Rd at Sligo Crk Pkwy/St Andre ▪ #34 Georgia Ave at Columbia Blvd/Seminary Ln ▪ #50 Colesville Rd at Franklin Ave	
Most Congested Roadways positively impacted by this pilot: ▪ #3 MD 97 SB Kensington Wheaton (A.M.) ▪ #12 MD 193 Silver Spring Takoma Park (A.M. & P.M.) ▪ #13 US 29 Kensington Wheaton (P.M.) ▪ #14 MD 97 Silver Spring Takoma Park (A.M.) ▪ #22 US 29 Fairland White Oak (P.M.)	

After-school service began four weeks into the school year with Monday through Thursday service at 4:15 (three buses) and Tuesday and Thursdays at 5:15 (two buses). Again, buses do not run on Friday afternoons due to early dismissals that do not meet the requirements of the program. Students were delivered to the Kemp Mill, White Oak, Olney, Rockville and Potomac areas. Morning service began toward the end of October with two buses from the Kemp Mill area. Approximately 820 student trips occurred weekly on 26 bus trips with an average ridership of just under 32 students per trip. Parents in the Olney area were reluctant to participate when the bus first began to operate. However, once service was initiated, the bus quickly filled to capacity and a waiting list was established. This too proved to be a very successful segment of the pilot.

Yeshiva School of Greater Washington - Girls Division-Linden Lane, Silver Spring

Bus Service Provided 1 bus at 7:50 Monday-Friday 1 bus at 4:35 & 5:35 Monday-Thursday	
Student Enrollment	385 (Includes All Linden Lane Students)
Number of Student Trips per week	126
After-school programming provided by school?	Extended day previously in place
Did the school previously provide transportation?	No
Most Congested Intersections positively impacted by this pilot: ▪ #22 Montrose Rd at Tower Oaks Blvd ▪ #27 Colesville Rd at Dale Dr ▪ #32 Georgia Ave at Forest Glen Rd ▪ #33 Colesville Rd at Sligo Crk Pkwy/St Andre ▪ #34 Georgia Ave at Columbia Blvd/Seminary Ln ▪ #50 Colesville Rd at Franklin Ave	
Most Congested Roadways positively impacted by this pilot: ▪ #3 MD 97 SB Kensington Wheaton (A.M.) ▪ #12 MD 193 Silver Spring Takoma Park (A.M. & P.M.) ▪ #13 US 29 Kensington Wheaton (P.M.) ▪ #14 MD 97 Silver Spring Takoma Park (A.M.) ▪ #22 US 29 Fairland White Oak	

The Yeshiva and Torah schools share the same building with one another. One morning and one afternoon bus began running in mid-November. Average ridership is 31 students per trip with 8 trips weekly. Service mirrors the Torah School service and neighborhoods.

St. Francis International School- St. Camillus Drive, Silver Spring

Bus Service Provided 2 buses at 4:15 p.m. Monday-Friday	
Student Enrollment	221
Number of Student Trips per week	65
After-school programming provided by school?	Yes
Did the school previously provide transportation?	No
Most Congested Intersections positively impacted by this pilot: ▪ [None identified]	
Most Congested Roadways positively impacted by this pilot: ▪ #5 US 650 Silver Spring Takoma Park (P.M.) ▪ #22 US 29 Fairland White Oak (P.M.)	

Service at St. Francis School got off to a shaky start for a number of reasons. Program approval was slow to come which in turn delayed the start of their pilot program. Only after-school service was provided because there were no MCPS buses able to perform morning routes. Buses were not able to arrive at the school before 4:15 while school dismissed at 3:30, so students who wished to use the bus had to participate in an after-school activity while they awaited the arrival of the buses. While considerable interest was expressed in the program, the actual number of riders was very low. It is believed this was due to the inability to provide service when needed.

St. Jude Regional Catholic School-Walbridge Street, Rockville

Bus Service Provided 1 bus at 7:50 a.m. Monday-Friday 1 bus at 4:15 p.m. Monday-Friday	
Student Enrollment	260
Number of Student Trips per week	146
After-school programming provided by school?	Yes
Did the school previously provide transportation?	No
Most Congested Intersections positively impacted by this pilot: ▪ #36 Aspen Hill Rd at Arctic Ave ▪ #37 Norbeck Rd at Muncaster Mill Rd ▪ #44 Norbeck Rd at Bauer Dr	
Most Congested Roadways positively impacted by this pilot: ▪ #20 MD 28 Aspen Hill (A.M.) ▪ #23 MD 28 Aspen Hill (P.M.)	

Service at St. Jude began in late September with the start of after-school buses. Initially three routes were planned to serve students living in the Wheaton, Bel-Pre, and Rockville/Derwood areas. However, two routes were immediately discontinued due to lack of participation and only the Rockville/Derwood

service continued. It is believed the one route that remained, which later had a morning version added toward the end of October, was successful because the area served had past experience with bus transportation. Several years preceding the pilot, the school had their own bus and provided service specifically from this area and points beyond. The community had been anxious to restore the program. The pilot did that for parents who were eager to participate. In some cases, a new bus service such as this does not become successful overnight, and perhaps some period of time is required for transportation services to become more popular. However, as with St. Francis International School, service has been underutilized partially due to the difference in time between dismissal and bus arrivals. After-school programs were created to occupy students while waiting for buses.

The Norwood School-River Road, Potomac

Bus Service Provided 2 buses at 4:30 p.m. Monday-Thursday	
Student Enrollment	440
Number of Student Trips per week	80 (estimated)
After-school programming provided by school?	Yes
Did the school previously provide transportation?	Morning Only Buses Were Previously Provided
Most Congested Intersections positively impacted by this pilot: ▪ #23 Bradley Blvd at Wilson Ln ▪ #47 River Rd at I-495 (E) ▪ #48 River Rd at Willard Ln/Greenway	

Project staff members met with parents in late September at the Norwood school to present the program prior to initiating service. About 25 parents attended the meeting and expressed strong support and enthusiasm for the plan. Some parents expressed how difficult and demanding their four hours of commuting time between homes and school was for them each day.

Early in January, service began after school with two buses. Initially three routes were planned. One would go south on River Road, one would go east through Bethesda and Silver Spring and one would go north through Rockville, Gaithersburg and Germantown. As with some of the other programs, buses did not arrive until well after school dismissal. The school provided an after-school enrichment program which parents had to pay to have students attend and, if enrolled, the bus ride home was free. (The school picks up the charges for the buses.) The delay in bus arrivals contributed to poor participation outcomes. In the end plans for the Rockville/Germantown bus were abandoned.

Additional Efforts

Throughout the first year of the pilot, staff continued to work with schools already in the pilot to encourage participation within their school communities, and learn as much as possible about market needs and trends. Some of the non-public schools created after-school study programs or other enrichment activities for students while they awaited the arrival of the MCPS bus which was dependent on existing MCPS schedules. Even with long after-school wait times, some schools had fairly high

participation. Others struggled. Because no processes were in place to purchase services either from private carriers or non-public schools that owned their own fleets, the pilot efforts to expand the program to test other models were hampered and limited to the use of MCPS buses during times that coincided with non-public school needs. This limitation on availability at times when most students were coming or going to schools severely limited participation.

Staff also continued to reach out to a number of non-public schools throughout the County to further explore needs and individual traffic and commuting patterns. School communities fairly consistently expressed interest in relieving congestion from areas surrounding their facilities. Parents also consistently expressed interest in finding better transportation solutions. Two primary factors prevented expansion. One, lack of resources to further build upon the existing pilot; and two, absence of alternatives to the use of MCPS buses.

Often limited participation was an outcome of two factors; differences in time when buses were available and were needed, and distance between student residences or size of the geographic area served. Continued efforts to identify successful models led to the recent initiation of transportation service to a seventh school, Mary of Nazareth Catholic School (MoN) in the Seneca area of Darnestown. MoN is a school where students reside in a broad geographic area and whose bell times are compatible with MCPS routes and where all 546 students arrived by car or minivan. On March 30, 2015, one morning only bus began transporting students to MoN from one stop in the Milestone Community located in the northwest quadrant of MD Routes 355 and 27 in Germantown. However, parents bring students to meet the bus from a much broader area including the Clarksburg, Damascus, Laytonsville areas and beyond. This bus service eliminates over 18 miles of daily round trip driving and time on the road for many participating families and relieves congestion on MD Routes 118, 28, and 112 while providing safe transportation for fifty four students five mornings a week. The true value of this case is to evaluate whether or not this type of service will be attractive to parents and effective at removing individual car trips from County roadways. It appears it is very successful on both measures.

Mary of Nazareth Seneca Road area of Darnestown

Bus Service Provided 1 bus at 7:45 a.m. Monday-Friday	
Student Enrollment	546
Number of Student Trips per week	265
Did the school previously provide transportation?	No
The roads and intersections along the way are not on the lists of Most Congested Roadways and Intersections in the County's Mobility Assessment Report.	

MD Route 28 is a major weekday commuter thoroughfare for people who travel from Frederick County and Poolesville to Rockville and points south. It often serves as a second option for motorists when I-270 is backed up due to accident or other reason. Nearly all of the 546 MoN students travel through the intersection of Darnestown Road (MD Route 28) and Seneca Road (MD Route 112) and parents who

drop their children at the school must again go through this intersection to travel back home or on to work. All of these traffic movements occur within a 25 minute window of time each morning. The school employs an off-duty Montgomery County Police officer daily at the entrance to the school to aide in traffic control and movement.

Program Cost under the MCPS Plan

Morning service to non-public schools was very inexpensive. Because the agreement called for MCPS to neither make nor lose money in this effort, MCPS did not charge an hourly rate for the morning bus ride since drivers were already being paid during the period between their middle and elementary runs. Hence, the only charge for morning service was for additional mileage. The $1.70 per mile is the same rate as MCPS charges other outside users for similar types of service. The morning bus ride to school on MCPS buses was exceptionally inexpensive as a result. MCPS buses were already in the areas needed for these added assignments which allowed costs to be kept very low. There was significantly more demand for this morning service than there were buses available to serve non-public schools.

MCPS buses that had completed their afternoon routes were made available to non-public schools after 4:15 p.m. Many of the non-public schools had a longer day than their County school counterparts and were dismissing at times nearly that late already. The post 4:15 hour had no limitations on how long a route could be which provided greater flexibility for use of MCPS buses to make additional stops and cover wider areas. The hourly rate was set at $36.50 per hour which was also the same rate as MCPS charges other outside users.

During the first year pilot, those schools that were able to participate enjoyed very cost effective service. The rates used by MCPS to recoup costs are very reasonable due to the efficiencies gained by the size of the fleet and massive scope of operation. MCPS buses were generally already in the area of the non-public schools they were serving which reduced unnecessary deadhead and added costs of "getting there." Unlike other providers, there was no need for added overhead costs to house, repair, or operate buses. No other model provides these pricing economies.

Pricing Structure for Non-Public Schools

Toward the end of the 2014 summer County officials determined that the program would be subsidized in a manner that was similar to the plan used in public transit which collects 22% of the full cost of the ride at the fare box with the remaining 78% covered by other federal, state, and local resources. This added detail made it possible to provide exact estimates to the schools for each of the proposed trips.

Each of the pilot schools was asked to establish a pricing structure within their community. Since ridership numbers were uncertain, it was difficult for schools to calculate the charge per ride. There were a lot of moving parts. The cost per ride varied based on factors such as number of riders, route time and distance, number of days per week, and whether it was a morning or after-school trip. These variables were difficult to calculate but schools were required to set their own rate of charge to students/families. Some schools subsidized the rides while other passed along all of their costs.

The total direct operating cost for the program is shown in Appendix 1. The total operating cost for the six pilot schools was estimated to be $163,586 for the school year. This amount reflected the full operating cost but did not include other administrative fees or the cost of traffic counts. It also does not include the 22% fee recovery from the schools.

The program-wide average cost to provide this service is estimated to be slightly less than two dollars at $1.89 per student ride (again, this does not include cost recovery or administrative overhead). A student ride is defined as one student riding one way. If a student rides the bus to and from school on any given day, that would be counted as two student rides. On average, the first semester bus trips had slightly fewer than 30 riders per bus trip.

Program Evaluation

Participation Factors

Program users have expressed high praises for the services provided. In some schools, participation exceeded expectation while in others ridership was less than expected. This is generally true in the transportation industry where some routes exceed capacity while others are less utilized.

The following factors may have contributed to the program successes:

- Where morning MCPS bus routes fit with non-public school needs, services were extremely attractive to schools and parents
- The MCPS structure of fees for the program was exceptionally affordable especially in the mornings when there was no hourly charge
- The County subsidy made the program affordable when the hourly charge was included for after-school rides
- Parents welcome the opportunity to put students on buses and avoid added commute times and driveway/roadway backups at schools
- When service was at the time and place people desired, parents and students embraced the opportunity
- Areas where high concentration of students resided added to the efficiency and utilization of buses and bolstered ridership counts

The following factors may have limited program success:

- Buses were not available when people most wanted the service
- Buses were limited to making only one or two stops in the mornings due to time limitations, thereby not being where people wanted the service and making driving to school more convenient
- Buses were not available for any morning service during the first month of school leading parents to make other arrangements that afterwards were difficult to change
- Buses are not available at the non-public school dismissal times leading to long delays

- Need for added programs at the end of the day to fill time while waiting for buses caused parents and schools to be disinterested

Cost Factors

This is an incremental program. In other words, it is a program designed to address specific traffic congestion caused by a target group, in this case non-public school students. Focusing on a target group provides an opportunity to concentrate on addressing their individual contributions to peak hour traffic congestion and devise unique plans that minimize their contributions to traffic congestion through use of creative solutions. This, along with other incremental programs such as cycling to work, carpooling, rideshare, use of public transit and a myriad of other efforts, all work together address the same problem: traffic congestion throughout the County. Some programs such as underpass construction at major high congestion intersections have measureable high cost solutions aimed at relieving congestion on County roadways. Others are less costly but do still contribute to a reduction in traffic congestion but are more challenging to measure.

One method for evaluating the success of this program would be to compare the cost of the program to other similar traffic mitigation efforts. Appendix #1 reflects the factors of operation and analyzes the cost for the first semester pilot. The full operating cost per student in this analysis is $1.98 per student trip. The County's 78% portion of that cost is $1.54 per student trip, with the schools paying a $.44 share per student trip. At this price point, parents and schools demonstrated a willingness to participate. At the other end of the scale, at schools where transportation services were offered, parents who had to pay $3.00 per student trip have been reluctant to participate and choose to drive or carpool. Therefore, if judged by willingness to participate under these price points, this model was successful.

Another factor that could be used to evaluate cost would be to compare the investment in public transportation to the pilot program. If the County's contribution to getting an adult commuter out of a car and into mass transit is a reasonable comparison, for every ride taken on a Ride-On bus, the County contributes $3.27. This is greater than the County's $1.54 contribution per student trip in the pilot. However, this may not be a fair comparison for several reasons. Obviously, public transportation has many more demands from type of vehicle to hours and days of operation. Nonetheless, it appears that the pilot model is not vastly more expensive than the adult commuter model and does have one other positive point worthy of note. Generally an adult commuter rides the bus one way to work in the morning and on the way home in the evening, a total of two peak hour tips. Many of the student trips are single student or two students riding with a parent. That parent most often contributes two peak hour trips both morning and afternoon, or four per day since there are many parents who drive to school in the mornings and then take a second peak hour trip to return home. Many parents in the pilot program related these types of commutes and time on the road.

Traffic counts were conducted at participating school's driveway entrances and exits before the pilot began and after it had been in operation for several weeks. At each of the four school sites studied (Berman, Torah and Yeshiva-Girls Division [collocated], St. Jude & St. Francis) the overall trend indicated total trips entering and exiting the schools during peak periods were decreasing. In some cases the

impact was quite sizeable, such as the 26% decrease in a.m. and p.m. trips seen at one of the schools (Torah). In other cases the decrease was more modest. Resources did not permit a complete analysis of external factors which may have influenced the overall counts on some of the days such as school-related events or parent-teacher conferences. Those types of analyses coupled with data collection over a more extended period of time would be necessary to fully document traffic impacts at the specific schools. Nevertheless, the fact that even on this very limited basis downward trends were seen in these counts is encouraging and indicates the possibility that with continued bus service over a more extended period of time a higher proportion of families would opt to participate and these initial downward trends seen during the pilot would strengthen. (See Appendix 7 for school traffic counts)

The first year pilot program operated with exceptional economies. No buses were purchased, no employees were hired, and no significant overhead costs were incurred and the program operated very successfully on a modest budget. The MCPS model provided an excellent platform for inexpensively exploring initial interest and potential for success of the program. It is unfortunate these benefits will no longer be available to support the program in such a meaningful manner. These economies had a significant positive impact on the first year of the program and contributed greatly to holding down costs.

Traffic Mitigation Impact

This program is specifically intended to mitigate traffic congestion during peak hours of travel. It should be noted that the program began with modest resources. Funding approval was unknown, costs to schools were not determined and no specific resources had been committed. MCPS buses were tasked with filling in where possible, but by no means has the project been able to run a comprehensive program for any of the schools in the pilot. Instead, segments of each of the pilot schools that could be served by MCPS buses during breaks and unused periods were cobbled together to provide a skeleton of services. Nonetheless, a fairly successful pilot emerged and a reasonable number of families were served while a commendable number of cars were removed from circulation at peak hour periods at a very low cost.

Attempts were made to collect traffic data in the vicinity of the schools; however they did not produce consistent findings. In this type of a program, counting cars at specific intersections or roadways proved to be difficult. In the future, alternative metrics will be developed to capture more accurate information.

More work needs to be done to gather information in a manner similar to that of the County's *Annual Commuter Survey.* Defining a meaningful evaluation process for assessing the project effectiveness is planned. While some hard data and anecdotal evidence has been collected which demonstrate traffic mitigation successes, additional work is needed to more accurately capture this data.

A direct example of the importance of this program can be seen on the ground at Kemp Mill Road and Arcola Avenue. Three major traffic contributors are present within a few hundred feet of each other in the area at morning peak, E. Brooke Lee Middle School, St. Andrew the Apostle Catholic Church School

and several hundred students leaving the immediate neighborhood area to travel to the Berman Academy, the Torah School of Greater Washington and the Yeshiva School of Greater Washington-girls division. The implementation of the bus routes used to serve the three latter traffic contributors has made a noticeable improvement along Kemp Mill Road in this area as noted by community members. A similar positive impact was noted in the areas of the schools being served by these pilot school buses along Linden Lane and Arctic Avenue and Aspen Hill Road. While these points may not be viewed as huge accomplishments, the scope of the project is still in the pilot phase and holds much potential for a larger positive impact.

Interviews with parents revealed several interesting factors that speak to the effectiveness of the program:

- Many parents reported driving from home to school, dropping students off and returning home
- Many parents reported making several trips to schools with siblings attending different schools at different times and with varied after-school departures some parents said they traveled to and from school up to four times per day.
- Some parents drive far out of their way to drop off at non-public schools on the way to work thereby spending considerable time and distance adding to the traffic congestion equation
- Passenger counts at schools reveal slightly more than two students per car on average
- One car arrival at a school represents two peak hour traffic trips, one to school and one to leave

Obviously, a more comprehensive plan could serve a higher number of families and students and would have a greater positive impact on traffic. Like any other new transportation program, it will take time, and considerable effort to change the inefficient commuting habits that have become customary in the non-public school communities. In fairness, these poor commuting habits have largely grown due to a lack of options. Providing oversight and organization holds promise for offering improved coordinated transportation services that are appealing to the non-public school community.

Impact of MCPS Bell Time Change

MCPS bus routes were built on a four tier system with high school opening at 7:25, middle schools at 7:55, first tier elementary schools at 8:50 and second tier elementary schools at 9:15. The afternoon dismissal times, following the same order are 2:10, 2:40, 3:05 and 3:30. Buses serving morning non-public schools do so between middle school and second tier elementary schools runs while in the afternoons, buses serve non-public schools after they have completed their afternoon runs at 4:15 or later.

At its February 10, 2015 meeting, the Board of Education voted to change the MCPS bell times (the times schools begin and end classes each day) by delaying the starting time of middle and high schools by 20 minutes and elementary schools by 10 minutes. The end of the day for all schools is to be delayed by 20 minutes. This has a twofold impact on the non-public school transportation program which relied completely on MCPS to provide services during the first year pilot.

First, the morning pilot program routes were squeezed between the middle school trip and the elementary trip for the buses doing non-public school runs. Finding buses with enough time to make the non-public school routes was very challenging. This was due in part to the need to transport non-public schools two to four times farther than a normal public school route would while serving a neighborhood public school. However, only buses that had a high school, middle school and second tier elementary school run could be considered for these assignments. In other words, buses that had a first tier elementary school run could not be used for non-public school trips and the number of routes without this first elementary tier assignment were scarce. With the change in bell times also comes a compression of the window of time used to make these morning non-public school runs. Since the non-public school routes are so much longer, every minute of the gap is needed to perform these trips. With this window of time being reduced by 10 minutes under the new bell time plan, there is even less likelihood buses will be available to do these non-public school trips.

Second, in the first year pilot program, the after-school buses arrived later than most of the schools wanted them. With the change in bell times an additional 20 minute delay will occur. Adding another 20 minutes to the wait time for non-public school student at the end of the day would simply make the service undesirable.

The option of delaying the non-public schools bell times to coincide with the MCPS change was discussed with non-public school administrators. In essence, they were being asked to consider changing their times on a reduced chance they would be able to secure morning buses. In addition, transportation provided in the pilot to most of the non-public schools represented service to only a small portion of their student body and changing their bell times for the sake of only a few of their students was considered problematic from fairness and majority benefit standpoint.

In its final evaluation, the use of MCPS for the original pilot schools in the pilot program is largely no longer a viable option. This creates a considerable setback for the program. MCPS may be able to serve other schools with school hours that coincide with the new bell times plan, but none have been identified so far.

Pilot Program Year Two

Prior to the start of the pilot program bus routes, the original report outlined several transportation models that could be employed to provide bus service to non-public schools. However, only one of the suggested methods (use of MCPS buses during periods of time when not in use) was implemented during the first year. During the 2014-15 school year, nearly 3000 non-public school student trips were provided weekly with transportation opportunities never before available, most riding on MCPS buses. Now, with the MCPS change in bell times, it is imperative that the focus shift from the use of MCPS buses to some of the other models outlined below for the program to continue successfully in year two of the pilot.

A series of options is outlined below. An important point to note however is that no one model best serves all schools in all locations. In some cases, one model is more cost effective and efficient than another. The deployment of several models is therefore the ideal manner in which to take maximum advantage of resources for this program. Additionally, a public/private effort brings small businesses into consideration along with County operated portions of the program. This win/win approach has many operational advantages.

During the first year of the program, staff spent considerable time interviewing non-public school administrators and examining their individual transportation plans. These discussions revealed the following:

- Significant demand for services was clear
- Transportation services provided by the schools were underutilized often due to high costs
- Opportunities for improvement were numerous but difficult for the schools to achieve independently
- Costs were unreasonably high because buses only serve one school rather than multiple schools
- Collaboration between the schools wasn't occurring on a regular basis because resources for outreach were non-existent or very limited
- In some cases, schools were under pressure from other government agencies to curtail neighborhood traffic without resources to do so
- Universal agreement that a centralized management approach would be beneficial to schools

Year Two Plan

No one transportation model provides the best opportunities for all of the schools and their transportation needs. Work during the first year allowed an assessment to occur where a wealth of information was gathered. Staff learned about the needs of the schools and the resources currently in the field. Based on these findings, a series of plans were developed to best address the individual

situations where efficient transportation services could be implemented in the most cost effective manner.

Moving forward, a set of criteria for identifying schools and locations where transportation services will work best should be applied to each setting. Some of those criteria include:

- Arranging transportation in settings where more than one school can be served by any bus in the program both morning and afternoon. One-school trips for buses are simply too costly to make the program reasonable or successful. (see Appendix 4 for cost comparisons)
- A minimal number of riders should be required on each route to demonstrate clear traffic mitigation efforts, perhaps 30.
- The areas served by buses should coincide with intersections and roadways noted as highly congested. (see Appendices 2 & 3 for lists)

Route and school pairings can only be accomplished through the use of a coordinator tasked with this goal. The schools do not have the resources or the technical expertise to implement such a plan and without coordination it would be difficult to make progress in such a venture. Appendix 5 demonstrates how such a plan might work with proper coordination. The A.M. and P.M. charts show how these pairings of trips to serve two schools might work. The examples shown are actual transportation needs that have been discovered through outreach to the non-public schools on the charts. The combinations shown are actual combinations that could be implemented with only some small adjustments to the starting and ending times of the participating schools. Trips noted in shaded letters are schools and trips that were actually performed during the first year pilot. A plan such as this would work best with a coordinator designing the combinations using a small fleet of buses to provide these services.

In addition to coordination, the staff member tasked with non-public school transportation coordination should also serve as a broker of sorts, making connections between private carriers and schools with transportation needs and those that are already using the services of a private carrier and developing other pairings to coordinate use of resources thereby facilitating an organized approach to managing these transportation links.

Models for Consideration

It cannot be stated too vigorously that the best plan for moving forward and implementing a comprehensive non-public school transportation program supported by the County must include a variety of methods or models designed to address the unique circumstances of each of the schools served. In some cases a set of co-mingled bus routes work best. In other cases it might be best to expand the use of fleets currently owned by one of the schools in the program. Buses serving non-public schools can either be owned by the County, a private carrier or a non-profit organization. Some schools may be better served through modifications to public transit routes such as Ride-On. Other concepts and combinations of carriers might also be a possibility. In any case, a central coordination effort is essential to success of the program.

The first year pilot program clearly demonstrated or identified the possibilities for making better use of existing services and improving coordination among an array of providers with a centrally planned or managed approach. With a non-public school population of 35,000 students in the County, many very good opportunities exist for mitigating traffic in high congestion areas through improved school transportation management.

The models listed below are but some of the ways student mass transportation plans could be implemented. Again it is stressed, no one model works best everywhere. Appendix 5 shows bus route configurations using the schools served in the first year of the pilot. To demonstrate how one bus could be used to serve more than one school, several other schools have been added to the example. The factors regarding school times and potential stop locations are real and are taken from information gathered during discussions with non-public schools that did not participate in the project but where information was sought to gain a better understanding of needs and develop potential real world proposals such as this. Also note, the list of routes in Appendix 5 relies on two methods noted below for providing transportation. One, a set of routes served by a newly established fleet and two, a set of routes that use existing contract buses such as those used to serve Our Lady of Good Counsel High School.

Option A: Use of MCPS Re-Purposed Fleet

By law, MCPS can only operate buses to transport students attending public schools for a defined period of time; currently twelve or fifteen years depending on the vehicle. Once that period has passed, buses can no longer be used to transport public school students. But, the operational life of a bus typically extends many years beyond that. The law is different for buses used to transport non-public school students. There is no limitation regarding the age of the bus used to transport non-public school students.

Regarding school buses in Maryland used to transport non-public school students, the law requires the following:

- The bus must have been originally manufactured for use in the state of Maryland
- The bus must have a Maryland certification sticker affixed to the vehicle at time of manufacture
- The bus must have been in continuous service in Maryland since the date of manufacture
- The bus may be transferred between counties, agencies, or private carriers as long as it is continuously registered in Maryland without breaks in time

Therefore the following three options employ extended use of MCPS buses within the County under these or perhaps other methods.

Buses being retired by MCPS offer the perfect opportunity for a startup plan for the program using a dedicated fleet to provide transportation services to non-public schools. They can be obtained for little or no money by the County, involve very little financial risk and could either be retained for use by a County agency or leased inexpensively to another service provider.

Option A1: MCPS Owned and Operated

MCPS would retain ownership of these buses and transport ONLY non-public school students under agreement with the County. Buses would not be permitted to transport public school students. Under this plan, MCPS-DOT would provide oversight. This plan would likely provide the greatest economies by making use of the MCPS existing infrastructure.

MCPS is well equipped to incorporate the needs of a small but separate unit into their transportation operation and expand the program to include non-public schools, assuming space can be found to house the additional buses and staffing and other logistical support is included in the plan. The benefits of such a plan would be numerous. MCPS already has in place hiring, background checks, training, management/supervision, certification, inspection, drug testing, and other processes needed to safely operate school vehicles. Most of the program needs noted could be incorporated into their existing program with little or no added cost.

Many policy issues regarding this arrangement would need to be addressed and resolved. Funding and separation of operation expenses will be a critical issue for MCPS if this option is pursued. If this option is considered viable, work would need to begin immediately to identify and address a myriad of issues and agreement factors. In future years, MCPS may also be able to benefit from this shared resource approach if the use of newer buses is employed for non-public school operations that do not violate the vehicle age restrictions. These newer buses could also then be used to transport public school students. With the use of repurposed MCPS buses, this first year plan requires very little risk or capital investment since little or no investment will be needed and no long term commitments need be made.

However, when this option was broached with MCPS leadership, they cited the additional burden created by the bell time changes and the plan to terminate the lease of the MCPS-DOT at their primary depot and administrative offices on Shady Grove Road as factors preventing them from being able to participate in this option. Additionally, MCPS leadership cited other obstacles such as lack of added parking and shortage of repair facilities and maintenance staff.

Notwithstanding the challenges this option poses, it remains the most efficient and practical option for uninterrupted continuation of the pilot program. Far fewer issues need to be resolved under this plan than for any other plan outlined below.

Option A2: Montgomery County Government Owned and Operated

MCPS could transfer or sell retiring buses to the County's Department of Transportation. The Department could then manage a non-public school transportation program similar to an arrangement used in St. Mary's County, Maryland where they provide transportation services to non-public schools by a unit in the County Government transportation office. This function would be managed by Transit Services and receive some support from MCPS. Since Transit Services is not familiar with school bus driver training requirements, options for a working agreement to provide essential program needs such as training could be formed between the County and MCPS. Other cooperative agreements, such as vehicle maintenance, could be reached that would provide needed elements of a school transportation program at minimal cost. As Ride-On and MCPS employees are represented by two different unions,

collective bargaining issues would need to be sorted out for a transportation unit providing a service such as this. Ride-On is currently limited in garage capacity and this need for additional buses would further constrain the system.

This option was reviewed by Montgomery County Division of Transit Services and deemed unworkable, noting conflicts with the Ride-On mission and competing priorities.

Option A3: Montgomery County Owned Buses Leased to an Independent Carrier or Non-Profit Organization

Ownership of the retiring MCPS buses could be transferred to Montgomery County Government as noted above. However, these buses could be leased for a nominal fee to an independent private carrier or non-profit organization that could operate, house and maintain them. The combinations of a shared resource approach are too numerous to enumerate. Discussions should ensue to explore these options to determine feasibility and benefits to each of the parties. In several of the examples below outlining contract services, vendors might be able to benefit from a bus lease agreement.

Option B: Contract Services

There are several contract carriers currently providing transportation services to non-public schools within the County. An approach would be to develop an RFP through an open solicitation process and identify a carrier to provide services as directed. Appendix 5 provides examples of how these route combinations might work. (Examples use real data and factors for schools shown.)

Currently, contractors within the County provide regular daily morning and afternoon service to only one of the schools in the original pilot group. Costs are very high with this type of transportation plan and often result in discontinuation of services. Adding a second school to the work of a contractor, so they can do two trips morning and afternoon with each bus, greatly improves the economics of this model and brings the costs to a more affordable level for parents and schools. Appendix 5, shows how routes provided by a primary carrier (such as in Options A1, A2, & A 3 above) might be combined with existing private carrier services. For example, morning contract bus routes #9-12 currently provide services to Our Lady of Good Counsel High School (OLGCHS). Appendix 5 shows how routes to St. Peter's School and the Torah School of Greater Washington could be combined with existing OLGCHS routes to create a more affordable transportation plan. In this case, since the existing services are provided by a properly licensed bus contractor, rather than on buses owned independently by the school, there are no insurance or licensing issues to resolve.

In this model, Montgomery County would still provide organization and program oversight in establishing a Ride-Share of sorts with the requirement being to serve more than one school with any bus each day. Appendix 4, *Cost Analysis: Contract Carrier* shows the difference between the cost of running a bus to one school or two each day.

It is also important to note, during the implementation of the first year pilot school routes great care was taken to consider the business stake of the private carriers already established and doing business

in Montgomery County with non-public schools. Every effort was made to avoid opportunities that would either compete with or be perceived as competing with private carriers or in any way infringe on their market. In the models described above, there are both vendor based and County owned options. Ideally, a combination of models should be implemented. The goal of the program should depend on vendors at least to the degree they currently serve non-public schools, but preferably to an expanded degree. Therefore, any County run program adopted should be sensitive to the business relationships of private carriers and should work to enhance their business investment and environment within the County.

Option C: Expand Use of Currently Owned Non-Public School Fleets

Several non-public schools own their own small bus fleets. In most cases, these fleets operate at exceptionally high costs providing services only to the school which owns them. The addition of a second school to their daily routes would greatly offset their overhead costs and make their cost structure much more reasonable for parents and schools. Some concessions may be required, such as small adjustments to bell times. However this sharing of resources also holds potential for vastly improving the use of equipment already owned by some non-public schools. There are some insurance and licensing issues to be resolved.

Similar to the combinations noted in Option B above, the Melvin J. Berman Hebrew Academy (MJBHA) owns a small fleet of buses. MJBHA routes could be combined with some routes serving the Torah School of Greater Washington to create a more financially sustainable model.

In a variation of this option, many of the buses operated by the non-public schools are not filled to capacity. Opportunities were present in several schools where nearby schools without transportation could make use of available seats on the buses serving their nearby neighboring school thus utilizing unused capacity and reducing direct costs to the operators. In some cases the same pickup and drop off locations could be used with only an added stop for the additional school served.

In this example, the County's role is to develop the plan and make that connection to the benefit of the parties. These combinations would be developed by the non-public school program coordinator. Resources required would include staff time for outreach, data-collection, analysis, reporting and coordination.

Option D: Contract with a Non-Profit Organization

Several church-based and non-profit organizations own and operate buses for seniors and other member of their congregations. The buses they use are generally not suitable for student transportation and do not meet Maryland Non-Public School Transportation requirements. However, they may be willing to purchase buses and assume the role of transportation providers and brokers. While this is an option to consider, much work would need to be done to bring it to fruition.

Option E: MCPS On and Along Services

During the recent public hearing the Council heard testimony from one parent about her experience as a student in the 70's riding an MCPS bus along with Ridgeview Middle School students. She would board a shuttle bus from at Ridgeview Middle School for a ride to St. Martins Catholic School in Gaithersburg.

This is a model that has been discussed with several schools and is a very effective model for getting many students to a non-public school with little to no cost. In the past, this plan was widely used at many Catholic Schools throughout the County and was very successful. However, some parents and school administrators today are very resistant to having their non-public school students ride along with public school students. Efforts should continue to identify a school community where this can be tested once again.

Option F: Expand use of Ride-On Routes

Enhanced student services could be provided through slight alterations to Ride-On bus routes tailored to the needs of non-public school students. In other cases, routes could be developed to serve areas where high concentrations of non-public school students reside and provide reasonably direct service to their schools. Youth Cruiser Passes, and other discount fares can be used to encourage participation. The non-public school transportation coordinator would be responsible for examining residence factors and identify the links necessary to encourage participation on existing public transit routes. By working with school and transit administrators they would promote such use in the schools and work with Transit Services managers to make minor route modifications needed to encourage participation. This would only be possible where older students are involved and other safety issues can be addressed. Challenges here include: adherence to FTA Charter Regulations, absence of red flashing lights for student safety when boarding along roadways, and vehicle safety designed for student passengers.

Conclusions

This non-public school transportation mitigation program has the potential to remove a significant number of cars from County roadways during peak traffic hours in an exceptionally cost effective manner. The first year pilot program successfully demonstrated, albeit on a small scale, the benefits and possibilities of coordination on a county-wide basis. Continued leadership by the County (or an entity responsible for such efforts) is absolutely necessary for non-public schools to be able to even consider mass transportation plans within their individual school communities. The successes demonstrated in the first year pilot point to the merits of considering such efforts for long term continuation.

While the change in bell times within the County schools hampers the progress made during the first year of the pilot program, other viable models are outlined in this report. Critical to the success of future efforts is the continued role the County must play in supporting this program. Most importantly, the program must be managed by an individual or individuals charged with the responsibility of organizing and promoting these efforts.

This report outlines several options that could be implemented to provide the means for non-public schools to participate in an organized approach to addressing the issue of overcrowded roadways, some of which is created by parent and student travel to and from non-public schools in the County. Each of the options presented above have their own set of challenges and value depending on where they are employed. While a transportation plan rooted within the establishments of MCPS-DOT and/or County Transit Services potentially offers the most economical outcomes, other options can still be accomplished and remain needed as a part of the overall solution. Implementing this transportation mitigation program under a shared MCPS-DOT/County Transit Services umbrella would encourage a stronger working relationship and sharing of resources between the two units which has been a longstanding interest of the County Council.

This program is a modest but innovative approach focused on addressing one of the most pressing concerns repeatedly cited by County residents--that of traffic congestion. This program offers a creative and imaginative solution to reducing the use of single car transportation and relieving traffic congestion in the County during peak hours in a meaningful manner and expands the use of underutilized transportation resources. While this strategy may seem unconventional to some in Montgomery County, similar programs are in place elsewhere in Maryland and across the Country. Once the program has gained acceptance, it will be viewed as simply another tool in the County's series of strategies designed to reduce traffic congestion.

APPENDICES

Appendix 1: School Traffic Mitigation Program Cost Per Student Trip First Semester

Appendix 2: 50 Most Congested Intersections

Appendix 3: Top 25 Most Congested Roadways

Appendix 4: Cost Analysis of Contract Bus Carrier

Appendix 5: Example of Possible Route Combinations

Appendix 6: Funding

Appendix 7: Traffic Counts

Appendix 1: School Traffic Mitigation Program Cost Per Student Trip First Semester

January 2015

This analysis is based on first semester performance during which six schools participated in the pilot. The Norwood School was added during the second semester and is not included in this analysis due to their late start. This analysis does not include administrative costs or cost of traffic counts.

Trips per week:	98
Student count per week:	2570 MCPS Bus Riders*
Average riders per trip:	26.22 (2570/98)

98 trips per week X 32 weeks = 3136 trips per year (note: 185/5=37 weeks per year)

2570 (count/wk) X 32 (weeks) = 82,240 student trips per year

First Semester Operating Costs	$66,748
Second Semester Operating Costs	$96,838
Total Operating Costs	$163,586

$163,586 / 82,240 = $1.98 cost per student trip (full operating cost excluding administrative cost)

$1.98 X .78 = $1.54 cost per student trip to Montgomery County

*ADDED BENEFIT: As a secondary benefit of the program, an additional 375 weekly student trips are made by Berman Academy buses for Berman students that otherwise would not travel to school by bus. This count is not reflected elsewhere in this report since no County funds are used to finance this element of the program. **Therefore the total student count per week is actually 2940.**

Appendix 2: 50 Most Congested Intersections

From April 2014 *Mobility Assessment Report*

Ranking	Intersection Name	Count Date	AM CLV	PM CLV	Policy Area	Congestion Standard
1	Rockville Pike at W Cedar Ln	11/6/2013	1957	1612	Bethesda - Chevy Chase	1600
2	Rockville Pike at Nicholson Ln	5/19/2011	1234	1929	White Flint	1800
3	Old Georgetown Rd at Democracy Blvd	6/9/2009	1423	1923	North Bethesda	1550
4	Damestown Rd at Riffle Ford Rd	3/12/2009	1061	1898	North Potomac	1450
5	Shady Grove Rd at Choke Cherry Ln	5/19/2010	1363	1853	Rockville City	1500
6	Connecticut Ave at East West Hwy	11/6/2013	1684	1848	Bethesda - Chevy Chase	1600
7	Georgia Ave at 16th St	6/15/2011	1122	1816	Silver Spring - Takoma Park	1600
8	Great Seneca Hwy at Muddy Branch Rd	1/4/2011	1464	1800	Gaithersburg City	1425
9	Frederick Rd at Montgomery Village Ave	4/25/2012	1536	1795	Gaithersburg City	1425
10	Rockville Pike at First St/Wootton Pkwy	5/24/2011	1768	1610	Rockville City	1500
11	E Gude Dr at Crabbs Branch/Cecil	3/24/2009	1742	1211	Derwood	1475
12	Veirs Mill Rd at Twinbrook Pkwy	6/3/2010	1426	1721	North Bethesda	1550
13	First St at Baltimore Rd	6/6/2012	1422	1718	Rockville City	1500
14	Connecticut Ave at Plyers Mill Rd	6/1/2011	1349	1710	Kensington - Wheaton	1600
15	Shady Grove Rd at Epsilon/Tupelo	2/11/2009	1704	1403	Derwood	1475
16	University Blvd at Piney Branch Rd	1/22/2009	1579	1703	Silver Spring - Takoma Park	1600
17	E Gude Dr at Southlawn Ln	3/5/2009	1692	1450	Rockville City	1500
18	Randolph Rd at Veirs Mill Rd	5/3/2012	1683	1679	Kensington - Wheaton	1600
19	Piney Branch Rd at Philadelphia Ave	1/21/2009	1228	1680	Silver Spring - Takoma Park	1600
20	Columbia Pike at Fairland Rd	10/11/2012	1416	1678	Fairland - White Oak	1475
21	Connecticut Ave at Jones Bridge Rd	2/29/2012	1490	1672	Bethesda - Chevy Chase	1600
22	Montrose Rd at Tower Oaks Blvd	11/14/2006	1663	1232	North Bethesda	1550
23	Bradley Blvd at Wilson Ln	3/12/2009	1650	1603	Bethesda - Chevy Chase	1600
24	Falls Rd at Maryland Ave/Pot. Valley	9/16/2008	1384	1658	Rockville City	1500
25	Georgia Ave at Norbeck Rd	9/11/2012	1656	1592	Aspen Hill	1475
26	Frederick Rd at Shady Grove Rd	3/15/2011	1647	1486	Shady Grove	1800
27	Colesville Rd at Dale Dr	2/26/2009	1604	1645	Silver Spring - Takoma Park	1600
28	Shady Grove Rd at Midcounty Hwy	11/18/2010	1644	1323	Derwood	1475
29	Clopper Rd at Waring Station Rd	6/2/2011	1636	1589	Germantown West	1425
30	Montgomery Village Ave at Stedwick	10/4/2007	1633	1170	Montgomery Village - Airpark	1425
31	Connecticut Ave at Bradley Ln	11/6/2013	1415	1628	Bethesda - Chevy Chase	1600
32	Georgia Ave at Forest Glen Rd	7/2/2008	1318	1626	Kensington - Wheaton	1600
33	Colesville Rd at Sligo Crk Pkwy/St Andre	3/5/2008	1508	1621	Silver Spring - Takoma Park	1600
34	Georgia Ave at Columbia Blvd/Seminary Ln	6/2/2011	1520	1624	Silver Spring - Takoma Park	1600
35	Veirs Mill Rd at First St	4/25/2012	1610	1475	Rockville City	1500
36	Aspen Hill Rd at Arctic Ave	11/6/2008	1609	1467	Aspen Hill	1475
37	Norbeck Rd at Muncaster Mill Rd	1/9/2009	1609	1238	Aspen Hill	1475
38	Columbia Pike at Greencastle Rd	11/15/2006	1607	1575	Fairland - White Oak	1475
39	Old Georgetown Rd at Tuckerman Ln	9/13/2011	1604	1261	North Bethesda	1550
40	Great Seneca Hwy at Quince Orchard Rd	4/25/2012	1602	1517	Gaithersburg City	1425
41	Randolph Rd at Parklawn Dr (W)	2/11/2009	1601	1156	North Bethesda	1550
42	Democracy Blvd at Falls Rd/S Glen Rd	4/1/2009	1594	1157	Potomac	1450
43	River Rd at Royal Dominion/Holton Arms	2/24/2004	1591	1358	Bethesda - Chevy Chase	1600
44	Norbeck Rd at Bauer Dr	10/18/2011	1586	1329	Aspen Hill	1475
45	Randolph Rd at New Hampshire Ave	5/15/2012	1440	1580	Fairland - White Oak	1475
46	Layhill Rd at Ednor Rd/Norwood Rd	4/27/2010	1579	1425	Olney	1450
47	River Rd at I-495 (E)	3/10/2009	1579	957	Bethesda - Chevy Chase	1600
48	River Rd at Willard Ln/Greenway	9/21/2011	1579	1530	Bethesda - Chevy Chase	1600
49	East West Hwy at Jones Mill/Beach	3/5/2009	1087	1574	Bethesda - Chevy Chase	1600
50	Colesville Rd at Franklin Ave	2/3/2009	1413	1571	Silver Spring - Takoma Park	1600

Appendix 3: Top 25 Most Congested Roadways

April 2014 *Mobility Assessment Report*

Table 4: Top 25 Congested Roadways by Policy Area

Ranking	Roadname	Bound	Policy Area	Congestion	Type	"Worst" Time of Day
1	MD 355	SB	Shady Grove	119%	Severe	Both Peaks & Midday
2	MD 185	SB	Bethesda	112%	Severe	Morning Peak
3	MD 97	SB	Kensington Wheaton	99%	Severe	Morning Peak
4	US 29	SB	Fairland White Oak	96%	Severe	Morning Peak
5	US 650	NB	Silver Spring Takoma Park	94%	Severe	Evening Peak
6	MD 97	NB	Silver Spring Takoma Park	93%	Severe	Evening Peak
7	US 29	SB	Kensington Wheaton	87%	Severe	Morning Peak
8	MD 355	SB	Bethesda	80%	Heavy-Severe	Morning Peak
9	MD 390	SB	Silver Spring Takoma Park	70%	Heavy-Severe	Morning Peak
10	MD 355	NB	Bethesda	69%	Heavy-Severe	Midday & Evening Peak
11	MD 355	SB	Derwood	69%	Heavy-Severe	Morning Peak
12	MD 193	WB	Silver Spring Takoma Park	68%	Heavy-Severe	Morning & Evening Peak
13	US 29	NB	Kensington Wheaton	68%	Heavy-Severe	Evening Peak
14	MD 97	SB	Silver Spring Takoma Park	65%	Heavy-Severe	Morning Peak
15	MD 586	EB	Kensington Wheaton	64%	Heavy-Severe	Morning Peak
16	MD 355	SB	Rockville	63%	Heavy-Severe	Morning Peak
17	MD 355	NB	Shady Grove	60%	Moderate-Heavy	Morning Peak & Midday
18	MD 355	SB	Clarksburg	59%	Moderate-Heavy	Morning Peak
19	US 650	SB	Fairland White Oak	59%	Moderate-Heavy	Morning Peak
20	MD 28	WB	Aspen Hill	58%	Moderate-Heavy	Morning Peak
21	MD 28	SB	Rural East	57%	Moderate-Heavy	Morning Peak
22	US 29	NB	Fairland White Oak	57%	Moderate-Heavy	Evening Peak
23	MD 28	EB	Aspen Hill	53%	Moderate-Heavy	Evening Peak
24	MD 119	NB	R&D Village	53%	Moderate-Heavy	Morning Peak
25	MD 119	NB	Gaithersburg	52%	Moderate-Heavy	Morning Peak & Midday

Appendix 4: Cost Analysis of Contract Bus Carrier

One and Two Schools Per Day Model Comparisons

35 students per route

$350 per day per bus for two trips (one morning and one afternoon, 35 students)

$450 per day per bus for four trips (two mornings and two afternoons, 70 students)

Single school cost structure:

$350 X 180 school days = $63,000/yr/bus

$63,000 X 78% = $49,140

$63,000 X *44% = $27,720

$27,720 / 35 = [redacted]

35 X 2 X 180 =12,600 passenger trips/year

$49,140 / 12,600 = $3.90 per passenger trip expense to MoCo

$3.90 X 180 X2 = $1404 per student per year cost to MoCo

Two school cost structure: (each bus would serve two schools per day)

$450 X 180 school days = $81,000/yr/bus

$81,000 X 78% = $63,180

$81,000 X 44% = $35,640

$35,640 / 70 = [redacted]

70 X 2 X 180 = 25,200 passenger trips/year

$63,180 / 25,200 = $2.51 per passenger trip expense to MoCo

$2.51 X 180 X 2 = $904 per student per year cost to MoCo

- On average, MCPS spends approximately $1,000/year/student on student transportation (includes all students and total annual transportation budget)
- Ride-On Cost to the County per passenger trip: $3.27 (Note: Service requirements for Ride-On and school transportation are very different and no direct comparison is appropriate or intended.)
- On average, MCPS per bus cost per year ($100M/1270) = $78,740/yr (includes capital and all operating costs for all programs)

*Since overhead costs were not included in the rates charged to the schools/students during the first year pilot, a rate of 44% is used to include direct and overhead costs.

Appendix 5: Example of Possible Route Combination

Bus #	A.M. Stops	School #1	Time	A.M. Stops	School #2	Time
1	Neelsville MS, MVMS, Redland MS		8:00	*Churchill HS		8:15
2	NWHS, QOHS, WHS		8:00	Churchill HS		8:15
3	BCMS, Burtonsville ES, PBHS, Fairland Ctr, Westover ES		8:00	Spring Mill		8:25
4	Argyle MS, Strathmore ES, Kennedy HS		8:00	Spring Mill		8:15
5	SSI, Blair HS, Northwood HS		8:00	Spring Mill		8:15
6	Fairland, Argyle, Glen Haven ES.		8:00	Spring Mill		8:15
7	Rockville HS, CESC		7:50	RMS, FVES, Wood MS		8:15
8	Einstein HS, Randolph Hills		8:00	Churchill		8:15
9	Contract Bus		7:30	Olney Area		7:55
10	Contract Bus		7:30	Olney Area		7:55
11	Contract Bus		7:30	Olney Area		7:55
12	Contract Bus		7:30	Olney Area		8:20

*Trips shown in shaded letters indicate trips provided during the first year of the pilot

Bus #	P.M. School #1	PM Time	Stops	P.M. School #2	PM Time	Stops
1		3:00	JFK HS, Strathmore ES, Argyle MS		4:15	Rockville, Potomac
2		3:30	Spring Mill		4:15	Spring Mill
3		3:05	CESC, Rockville HS		4:15	Spring Mill
4		3:00	Northwood HS, Blair HS, SSI,		4:15	Spring Mill
5		3:00	Randolph Hills, Einstein		4:15	Rockville, Potomac
6		3:00	Neelsville MS, MVMS, Redland MS		3:30	Wood MS, FVES, Redland MS
7		3:00	Westover ES, Fairland, BCMS, Burtonsville ES, PBHS,		3:30	Hyattsville
8		3:00	Glen Haven ES, Argyle, Fairland		3:30	Burtonsville
9		3:30	Contract Bus		4:55	Kemp Mill
10		3:00	NWHS, QOHS, WHS		4:00?	B-CC, Blair
11		3:00	Olney Area		3:30	Contract Bus
12		3:00	Olney Area		3:30	Contract Bus

13		3:00	Olney Area		3:30	Contract Bus

Appendix 6: Funding

The funding plan presented below reflects the FY 16 Request and a proposed Modified FY 16 Plan. These modifications are noted because of recent changes in the use of MCPS buses which was brought about by the bell time changes the school system plans to implement in the 2015-16 school year. Also note, no funds have been assigned for traffic counts. In lieu of performing traffic counts, other means should be considered to determine traffic impacts.

School Traffic Mitigation Program Cost Analysis Projection

	Request FY 16	**Modified FY 16 Plan**
Consultant	$106,160	$106,160
MCPS Bus Costs First Semester	$ 91,750	$25,000*
MCPS Bus Costs Second Semester	$180,000	$25,000
MCPS 15% Management Fee	$40,673	
Traffic Counts	$26,300	
Transit Services Staff (assumes transition)	$115,000	$115,000
Non-Public Schools	$50,000	
Contract Bus Service	$50,000	$388,813
Total Appropriation Required	**$659,973**	**$659,973**
Revenue from schools	$145,194	$145,194
Net	$514,779	$514,779

*Some trips by MCPS may still be viable under the new bell schedule.

Appendix 7: Traffic Counts

Berman Academy Traffic Count

Day & Dates of Counts	Time Period & Direction	Berman Academy			
First date is Initial Count -				Delta	
Second date is Follow-Up Count		Initial	Follow Up	n	%
Mon 10/20/14 & Mon 12/8/14	AM Entering	241	225	-16	-6.64
Tues 10/21/14 & Tues 12/9/14	AM Entering	279	262	-17	-6.09
Wed 10/22/14 & Wed 12/10/14	AM Entering	243	302	59	24.28
Thurs 10/23/14 & Thurs 12/11/14	AM Entering	244	252	8	3.28
TOTAL		1007	1041	34	-
AVERAGE		252	260	9	3.71
Mon 10/20/14 & Mon 12/8/14	AM Exiting	123	130	7	5.69
Tues 10/21/14 & Tues 12/9/14	AM Exiting	94	108	14	14.89
Wed 10/22/14 & Wed 12/10/14	AM Exiting	132	121	-11	-8.33
Thurs 10/23/14 & Thurs 12/11/14	AM Exiting	137	127	-10	-7.30
TOTAL		486	486	0	-
AVERAGE		122	122	0	1.24
Mon 10/20/14 & Mon 12/8/14	PM Entering	138	132	-6	-4.35
Tues 10/21/14 & Tues 12/9/14	PM Entering	166	154	-12	-7.23
Wed 10/22/14 & Wed 12/10/14	PM Entering	128	168	40	31.25
Thurs 10/23/14 & Thurs 12/11/14	PM Entering	157	138	-19	-12.10
TOTAL		589	592	3	-
AVERAGE		147	148	1	1.89
Mon 10/20/14 & Mon 12/8/14	PM Exiting	214	190	-24	-11.21
Tues 10/21/14 & Tues 12/9/14	PM Exiting	207	184	-23	-11.11
Wed 10/22/14 & Wed 12/10/14	PM Exiting	172	185	13	7.56
Thurs 10/23/14 & Thurs 12/11/14	PM Exiting	187	210	23	12.30
TOTAL		780	769	-11	-
AVERAGE		195	192	-3	-0.62

Note: AM count time is from 6:30 to 9:30,
PM count time is from 3:00 to 5:30

St. Francis Traffic Count

Day & Dates of Counts	Time Period & Direction	St Francis			
First date is Initial Count -				Delta	
Second date is Follow-Up Count		Initial	Follow Up	n	%
Mon 10/20/14 & Mon. 12/15/14	AM Entering	418	451	33	7.89
Tues 10/14/14 & Tues 12/16/14	AM Entering	474	376	-98	-20.68
Wed 10/15/14 & Wed 12/17/14	AM Entering	502	436	-66	-13.15
Thurs 10/16/14 & Thurs 12/18/14	AM Entering	449	517	68	15.14
TOTAL		1843	1780	-63	-
AVERAGE		461	445	-16	-2.70
Mon 10/20/14 & Mon. 12/15/14	AM Exiting	239	318	79	33.05
Tues 10/14/14 & Tues 12/16/14	AM Exiting	183	346	163	89.07
Wed 10/15/14 & Wed 12/17/14	AM Exiting	284	329	45	15.85
Thurs 10/16/14 & Thurs 12/18/14	AM Exiting	278	361	83	29.86
TOTAL		984	1354	370	-
AVERAGE		246	339	93	41.96
Mon 10/20/14 & Mon. 12/15/14	PM Entering	267	252	-15	-5.62
Tues 10/14/14 & Tues 12/16/14	PM Entering	260	285	25	9.62
Wed 10/15/14 & Wed 12/17/14	PM Entering	292	279	-13	-4.45
Thurs 10/16/14 & Thurs 12/18/14	PM Entering	320	289	-31	-9.69
TOTAL		1139	1105	-34	-
AVERAGE		285	276	-9	-2.54
Mon 10/20/14 & Mon. 12/15/14	PM Exiting	279	293	14	5.02
Tues 10/14/14 & Tues 12/16/14	PM Exiting	300	323	23	7.67
Wed 10/15/14 & Wed 12/17/14	PM Exiting	323	269	-54	-16.72
Thurs 10/16/14 & Thurs 12/18/14	PM Exiting	326	266	-60	-18.40
TOTAL		1228	1151	-77	-
AVERAGE		307	288	-19	-5.61

Note: AM count time is from 6:30 to 9:30,
PM count time is from 3:00 to 5:30

St. Jude Traffic Count

Day & Dates of Counts	Time Period & Direction	St Jude			
First date is Initial Count -				Delta	
Second date is Follow-Up Count		Initial	Follow Up	n	%
Mon 11/3/14 & Mon. 1/26/15	AM Entering	170	170	0	0.00
Tues 10/28/14 & Tues 1/13/15	AM Entering	174	175	1	0.57
Wed 10/29/14 & Wed 1/14/15	AM Entering	181	191	10	5.52
Thurs 10/30/14 & Thurs 1/15/15	AM Entering	205	164	-41	-20.00
TOTAL		730	700	-30	-
AVERAGE		183	175	-8	-3.48
Mon 11/3/14 & Mon. 1/26/15	AM Exiting	165	163	-2	-1.21
Tues 10/28/14 & Tues 1/13/15	AM Exiting	146	175	29	19.86
Wed 10/29/14 & Wed 1/14/15	AM Exiting	154	163	9	5.84
Thurs 10/30/14 & Thurs 1/15/15	AM Exiting	146	148	2	1.37
TOTAL		611	649	38	-
AVERAGE		153	162	10	6.47
Mon 11/3/14 & Mon. 1/26/15	PM Entering	11	7	-4	-36.36
Tues 10/28/14 & Tues 1/13/15	PM Entering	10	7	-3	-30.00
Wed 10/29/14 & Wed 1/14/15	PM Entering	173	150	-23	-13.29
Thurs 10/30/14 & Thurs 1/15/15	PM Entering	161	158	-3	-1.86
TOTAL		355	322	-33	-
AVERAGE		89	81	-8	-20.38
Mon 11/3/14 & Mon. 1/26/15	PM Exiting	146	100	-46	-31.51
Tues 10/28/14 & Tues 1/13/15	PM Exiting	162	167	5	3.09
Wed 10/29/14 & Wed 1/14/15	PM Exiting	145	167	22	15.17
Thurs 10/30/14 & Thurs 1/15/15	PM Exiting	167	165	-2	-1.20
TOTAL		620	599	-21	-
AVERAGE		155	150	-5	-3.61

Note: AM count time is from 6:30 to 9:30,
PM count time is from 2:30 to 5:30

Torah School and Yeshiva Girls Division Traffic Count

Day & Dates of Counts	Time & Direction	Torah and Yeshiva Girls			
First date is Initial Count -				Delta	
Second date is Follow-Up Count		Initial	Follow	n	%
Mon 10/6/14 & Mon. 1/5/15	AM	151	141	-10	-6.62
Tues 10/7/14 & Tues 2/3/15	AM	148	135	-13	-8.78
Wed 10/1/14 & Wed 1/28/15	AM	146	148	2	1.37
Thurs 10/2/14 & Thurs 1/8/15	AM	155	126	-29	-18.71
TOTAL		**600**	**550**	**-50**	-
AVERAGE		**150**	**138**	**-13**	**-8.19**
Mon 10/6/14 & Mon. 1/5/15	AM Exiting	85	90	5	5.88
Tues 10/7/14 & Tues 2/3/15	AM Exiting	98	91	-7	-7.14
Wed 10/1/14 & Wed 1/28/15	AM Exiting	111	75	-36	-32.43
Thurs 10/2/14 & Thurs 1/8/15	AM Exiting	96	84	-12	-12.50
TOTAL		**390**	**340**	**-50**	-
AVERAGE		**98**	**85**	**-13**	**-11.55**
Mon 10/6/14 & Mon. 1/5/15	PM	72	74	2	2.78
Tues 10/7/14 & Tues 2/3/15	PM	75	65	-10	-13.33
Wed 10/1/14 & Wed 1/28/15	PM	94	69	-25	-26.60
Thurs 10/2/14 & Thurs 1/8/15	PM	75	77	2	2.67
TOTAL		**316**	**285**	**-31**	-
AVERAGE		**79**	**71**	**-8**	**-8.62**
Mon 10/6/14 & Mon. 1/5/15	PM Exiting	134	103	-31	-23.13
Tues 10/7/14 & Tues 2/3/15	PM Exiting	142	97	-45	-31.69
Wed 10/1/14 & Wed 1/28/15	PM Exiting	151	103	-48	-31.79
Thurs 10/2/14 & Thurs 1/8/15	PM Exiting	126	103	-23	-18.25
TOTAL		**553**	**406**	**-147**	-
AVERAGE		**138**	**102**	**-37**	**-26.22**

Note: AM count time is from 6:30 to 9:30,
PM count time is from 3:00 to 5:30

Type of activity to be funded:

Excerpt of FY16 Grant Application

Check all that apply for this project.

- Services to Older Adults/People with Disabilities
- Services to Young Children, Families (includes early childhood programs)

1. Briefly describe the mission of your organization and the programs and services which support this mission. How have your organization's efforts made a difference in the community?

in 300 words or less.

The Jewish Federation of Greater Washington's mission is to care for those in need, locally and abroad. Federation allocated over $8.7 million in FY15 to its 35 local partner agencies. Key recipients of the funds include local human service agencies serving Montgomery County residents, such as JSSA (The Jewish Social Service Agency), the Jewish Council on Aging (JCA), the Jewish Foundation for Group Homes (JFGH) and the Jewish Coalition Against Domestic Abuse (JCADA), as well as aging and special needs services provided by the Jewish Community Center of Greater Washington (JCCGW). Our service network touches over 100,000 individuals. The Federation and its local partner agencies share the County's vision of ensuring that populations of all ages benefit from innovative, responsive and well-researched programming and services. To that end we have been working on a project to centralize, standardize and better leverage costs related to transportation services in the County.

2. Briefly identify the specific program or purpose for this funding request.

in 20 words or less.

This will be the published purpose for any grant awards and should be brief and very specific. For example, "Provide improved education and leadership skills for African youth," or "Provide emergency assistance for rent and utilities."

Coordinate transportation services and provide more efficient transportation among the Jewish Federation's partner agencies for the same or less cost.

3. Briefly describe your project, why it is needed and how it helps advance County priorities.

in 300 words or less.

The Community Transportation Project is designed to better leverage current transportation services and provide improved transportation among the Jewish Federation's network of partner agencies for the same or less cost. In order to involve 14 different agencies, 60 vehicles and over 100 drivers, several initiatives are being researched and implemented that build upon interagency operations, centralized services, and transportation management. These result in cost savings in: fuel purchase, background checks, maintenance, vehicle purchase and repair and bus rental.

Our transportation consultant is working closely with the County Executive's office to implement the pilot public/private school transportation program in collaboration with MCPS. This program has had much success in the limited time that it's been in operation. It has saved significant funds and taken hundreds of cars off the road during peak driving time.

In order to implement this multi-agency motor pool, we have enlisted the services of a contracted staff person to collaborate with agencies in managing vehicle usage. This ensures accuracy and efficiency, as well as enabling us to provide ongoing assessment of the project to determine future usage and management.

The Jewish Federation provides in-kind office space (including use of office equipment) and administrative support, and we are actively seeking donations of additional vehicles. This grant is to offset a portion of the cost of the transportation consultant.