MD 355 North Corridor Advisory Committee Meeting #3 Summary
June 3rd, 2015 from 6:30 to 8:45 PM
Upcounty Regional Services Center
12900 Middlebrook Road, Suite 1300
Germantown, MD 20874

Attendees:

Members	
Jerry Callistein	Era Pandya
Robert F. Cowdrey	Paula Bienenfeld
Nallathamby Devasahayam	Peter L. Shaw
Stephen Hendrickson	Gail H. Sherman
Kathie Hulley	Goke Taiwo
Richard Lindstrom	Paul Yanoshik
Mark Pace	Joel Yesley
David A. Rosenbaum	Dennis Cain
Cherian Eapen	Peter Henry
Ronald C. Welke	Helen Triolo
Apologies	
James Martin	John Francis Torti
Dayssi Morera	Andrew Williamson
Tom Savoie	Kam F. Yee
Margaret Schoap	
Staff	
Montgomery County – Joana Conklin	Montgomery County – Rafael Olarte
SHA – Jamaica Arnold	SHA – Tessa Young
SHA – Joe Harrison	MTA – Kyle Nembhard
Lead Facilitator – Andrew Bing	Facilitator – Mary Raulerson
Facilitation Staff – Liz Gordon	SHA Consultant PM– Alvaro Sifuentes
CAC South Facilitator – Yolanda Takesian	SHA Traffic Consultant – Scott Holcomb
SHA Consultant Support – Melissa Hedrick	SHA Transit Consultant – Chris Bell
Public	
Barry Gore – City of Rockville	

Handouts

Handouts provided to CAC Members included:

- Summary from CAC Meeting #2/Purpose and Need
- Agenda for CAC Meeting # 3
- Presentation for CAC Meeting #3

Meeting materials will be posted on the project website: *www.montgomerycountymd.gov/rts*

Introductions

Mary Raulerson opened the meeting and reviewed the agenda indicating that tonight's meeting would help to build the foundation for work to be done in subsequent meetings. Given the type of information being presented members should ask clarifying questions along the way and after each presentation would be invited to comment and ask questions on what had been presented. She also mentioned that a technical meeting was also being added for CAC members who wanted to delve more deeply into the data. Post meeting note: Due to the high level of interest among members, the technically focused meeting has been added as a regular CAC meeting.]

Project Update – Corridor Planning Study

Alvaro Sifuentes provided the CAC members with a quick re-cap on what will be accomplished as part of this study. This is the very beginning of a lengthy process to study BRT along MD 355. By the summer of 2016, we will be recommending alternatives that will be studied in more detail in the next phase of the project. This more detailed work will include additional engineering, environmental, traffic and ridership analysis on those alternatives. This is not a National Environmental Policy Act (NEPA) or Maryland Environmental Policy Act (MEPA) study; however a NEPA or MEPA study may need to be completed for MD 355 in the future. We are currently using the Federal Highway Administration's Planning and Environmental Linkages (PEL) approach that will lay the foundation to move into NEPA or MEPA. Many of the products developed during PEL will guide the subsequent environmental review process.

Question (Q). *Are you conducting Scoping meetings? Why have you prepared purpose and need before scoping? This isn't in line with NEPA process but is borrowing NEPA language.*
Response (R). We are developing a foundation for evaluating alternatives. We are in a pre-NEPA, pre-MEPA phase but this early work will help to meet NEPA process requirements. A scoping meeting will be held when we are ready to determine alternatives that will be evaluated during the NEPA phase.

Project Update – Informational Open House

As discussed during the last CAC meeting we were planning to hold an Informational Open House with the general public in the spring of 2015. We decided however that this meeting would be postponed until the fall of this year. The main reason to postpone the public meeting was to allow for greater coordination and input from the CAC members. In addition, the Cities of Rockville and Gaithersburg are conducting complimentary BRT studies and we wanted to have extra time to evaluate or incorporate any preliminary findings of their studies if possible. Once the new dates have been identified we will inform the CAC members. In addition the public will be informed through a series of outreach efforts.

Transit Ridership

Chris Bell led the transit ridership presentation. Mr. Bell began by explaining that the presentation tonight was focused on providing some context and understanding of potential transit markets within the study corridor.

The presentation began with a general description of the study corridor and high-level information about growth in households, residents, and jobs within corridor between today and 2040, the project horizon year. These data were presented for the corridor as a whole as well as by individual districts within the corridor. Of note in the presentation was the finding that the forecasted center of economic activity within the study corridor will shift from the southernmost portion of the corridor (Bethesda area) to the White Flint area, which is slated for significant growth and densification in the County's long-range plans.

In response to questions from CAC members, Mr. Bell emphasized that the data presented for the corridor was only a small subset of the data that would be utilized during the ridership forecasting process. Specific questions and responses are as follows:

Q. *What about trips that pass through the districts from outside of the corridor study area?*
R. Through trips and trips originating from or destined to places outside the corridor will be accounted for in ridership forecasting effort for the build alternatives. The physical elements that Alvaro will discuss along with service planning options (such as frequency and span of service) will influence trip estimates. We are just beginning that effort now.

Q. *What date is the forecasting model? How many runs?*
R. I don't know the specific model run number. But this comes out of the trip table of the latest Washington Area regional model employment and population forecast: Round 8.3; some of the number details are not available. Staff from each jurisdiction in the region come together and reach consensus on population and employment in each jurisdiction. That forecast is then adopted by the Council of Governments and used for the model. The most recent model has been adopted within last two or three months.

Q. *Do these models include Frederick County? Are Frederick, Carroll and Howard Counties included in the model?*
R. Frederick County is a part of the Metropolitan Washington Council of Governments (MWCOG) so it does participate in decisions on population and employment projections. [This statement is a post meeting correction amending the incorrect statement that Frederick County is not part of MWCOG.] For counties in the Baltimore Region, Howard County for example, detailed trip flow information is available from counts and surveys. Everything modeled is based on calibration relative to real world data. There is constant data collection in the region such as cordon counts and surveys.

Q. *Are you assuming that no one from outside of the county will use the proposed service?*
R. For alternatives that do not have station parking, the model will not show demand from people who would have to drive to access the service. Whether or not parking is included at stations is a policy decision.

Q. *What's the margin of error between the model outputs and the regional model?*

R. That specificity is really more appropriate for the technical meeting. The COG model is primarily for the purposes of identifying air quality and other impacts from transportation infrastructure changes. The Environmental Protection Agency (EPA) has to sign off on it, which requires calibration and a small margin of error. The regional model is customized for the purposes of each study corridor as it was for the Silver and Purple Lines which have be certified by the Federal Transit Administration (FTA).

Q. *What are mode split assumptions for this model?*
R. That will be discussed later in the presentation.

Mr. Bell also explained to CAC members that the five districts shown in different colors within the study corridor were developed for use in explaining and presenting demographic characteristics but that a more detailed geography (Transportation Analysis Zones) will be used in the actual ridership forecasting.

The next element of the presentation focused on travel patterns within the study area, with existing travel patterns discussed first and forecasted travel patterns in 2040 discussed next (the data presented were for all daily trips, all trip purposes). Two key points from the existing travel patterns discussion are:

- Commute trips within the study corridor are a relatively small portion of total trips within the corridor (about 13% of total trips).
- The highest trip flows actually occur within districts within the study area, meaning a large majority of trips within the corridor are short-distance trips.

Forecasted 2040 travel patterns follow the same patterns as existing patterns, though with a higher number of trips (the estimated growth of trips within the corridor between current and 2040 is 27%).

Q. *Are trip types determined by the time they occur?*
R. No, they're based on the stated purpose of the trip (determined by survey).

Q. *What areas are included in the commute trips?*
R. Commute trips shown are only within the study area. Commute trips that end beyond the study area such as Washington, DC, are not included.

Q: *Only 13 percent of all trips are commute trips?*
R. Within the study area, yes. We can confirm if that pattern holds, regionally.

Q. *Are these trip types determined by survey?*
R. The model outputs predict the trip types. The data the model uses are based on surveys.

Q. *Would driving to Metro and then going to work be one trip or two?*
R. One. A trip is defined by start and end point; it would only be two trips if a stop was made at a station area destination and then the work trip was resumed.

Q. *Will the Corridor Cities Transitway (CCT) service really extend to Comsat? We've heard that won't actually happen.*
R. Because it is shown in the adopted long range transportation network, CCT service to Comsat is included in our analysis assumptions and will be among the modeled trip options for ridership estimating.

The third presentation was related to the current transit service within the corridor. There are three Ride On routes within the corridor: Route 75, Route 55, and Route 46. Route 55, which runs between Germantown and Rockville, is the heaviest ridership route in the Ride On system and carries nearly 8,000 riders per day. Ridership on the three routes shows that there already is a very strong transit market within the corridor, which forms a strong base for the proposed BRT service.

Q. *It does not seem like people really use the Ride On 55 to travel along the corridor. It seems to be more often used to access Metro.*
R. The data generally corroborates that high numbers of riders are going to Shady Grove Metro.

Q. *Is growth in projected transit ridership connected to White Flint development?*
R. White Flint is part of projected transit growth, but it also includes background growth.

Q. *Shady Grove Metrorail station parking is at capacity. Does the model assume more parking there?*
R. The 2040 network may include more station area parking.

Q. *The potential for local trips, and providing for short trips, undermines the purpose of a BRT which stops less frequently.*
R. Serving trips within the districts does not imply that the bus will stop every two blocks. While the BRT stops much less frequently than a local bus it can still serve short or local trips as well as longer trips along the corridor.

Q. *Part of the Ride On 55's success in ridership is that it accesses lots of neighborhoods.*
R. Frequent and reliable service with fewer stops can attract people from distances further away. For example, WMATA's MetroExtra service is popular even without dedicated right of way.

The final portion of the presentation was a discussion of transit accessibility. Accessibility is measured as the number of jobs that are accessible by transit within a certain amount of time. Not surprisingly, the highest accessibility measures occur around Metro Stations within the corridor. Of note, however, was the potential for the BRT service to improve accessibility in the areas between Metro stations as well as in the northern portion of the county, where the transit network is not as well developed as in the south portion of the county.

Traffic Conditions and Forecasts

Scott Holcomb presented existing and forecasted year (2040) traffic volumes for the MD 355 corridor. These volumes will be used as a base to begin evaluations of the various BRT options that will be analyzed in this study. Traffic operations are important in this project as the nature of BRT systems requires the close interaction of transit vehicles and roadway traffic.

Existing and 2040 Average Daily Traffic (ADT) volumes for MD 355 were discussed first. ADT volumes represent the average total number of vehicles that passes a point on a roadway over a 24 hour period. Existing traffic volumes were developed primarily through the use of traffic counts taken in late 2014. Based on a request from a CAC member, the volumes developed for this project will be checked versus data found online on SHA's website to assure consistency in data sets. The traffic counts used to develop the existing traffic volumes were taken mid-week (Tuesday through Thursday) so that the worst of the weekday rush hours is captured as people tend to use Mondays and Fridays for telecommuting and flexing work schedules. The volumes shown for each roadway section represent the range of ADT values found between the two endpoints of the section. For example, for the section between I-495 and MD 410 in Bethesda, ADT's range from 28,800 to 67,800 vehicles per day, with the lower value found down near the MD 410 intersection and the higher value found further north near the Beltway interchange. From the north end of the 355 corridor moving south, traffic volumes tend to increase until peak near the beltway, reaching ADTs of roughly 60,000 vehicles. ADTs fall again toward central Bethesda, to approximately 30,000. Projected traffic volume growth rates range from approximately 13% to 23%. The growth projection might have been even higher than this, but is being held down somewhat by planned improvements to parallel roadways. The highest growth area is toward the middle of the study corridor, near White Flint, where there is a lot of potential for development. The southern part of the corridor within the beltway is already operating at nearly saturated conditions, and growth projections are lower there.

CAC members asked Mr. Holcomb to clarify points made regarding ADT:

Q. *How are there two numbers for an average volume in each district?*
R. The range of volumes represents the minimum and maximum volumes counted at various points on that section of roadway.

Q. *What types of traffic counts were done?*
R. 13 hour long counts on an average weekday. Those numbers were factored to reflect a 24-hour span.

Q. *When did you do the count?*
R. Last fall.

Q. *Current traffic has changed due to the recently opened connection between Seneca Highway and MD 355. It is much greater now even than last fall.*
R. We will look into the situation and make adjustments where needed.

2040 ADT volumes were developed using the same MWCOG travel demand model with Round 8.3 Socio-Economic input data as described in the Transit presentation. Traffic volumes are expected to grow between now and 2040 with the forecasted growth in households and employment in the study area and region. Volumes were shown to grow between 13 to 23% along the corridor depending on expected development levels as well as changes to the transportation network. In areas such as White Flint where denser development is planned, traffic growth is expected to be more than 20% over the 25 year study period. The area inside the Beltway shows lower growth as it is already largely built out and the roadway system is saturated. It should be noted that the 2040 volumes represent No-Build conditions in that no changes to the transportation system (including the building of BRT service) are assumed beyond those included in the region's Fiscally Constrained Long Range

Plan (CLRP). The proposed development growth that is an input into the model (Round 8.3) is developed for MWCOG by the County, and is determined by demographers based on zoning, development trends, etc.

Mr. Holcomb described how transportation professionals use a grading system from A to F to characterize traffic operations during specific hours, such as the morning and evening rush hours. These grades are referred to as Levels of Service (LOS). Mr. Holcomb shared with the group a display of the general characteristics of each LOS grade for intersections and roadways. LOS A is defined as operations with highly stable/free-flow conditions with little delay and uninterrupted vehicle movement. On the other end of the spectrum is LOS F which frequently has stop and go conditions and high delays for users. The group noted that LOS F can cover a wide range of failing operations as the grading system does not go beyond F.

For this project, the LOS for the morning and evening peak period hours has been developed for Existing and Forecasted 2040 No-Build traffic. The presentation showed the calculated LOS for 14 of the larger intersections in the corridor, along with the average delay (in seconds) experienced by vehicle occupants that pass through the intersection. Many of these 14 locations currently operate at LOS D, E or F during one or both peak period hours. The chart presented shows the overall LOS for the intersection for all traffic passing through it, including those traveling in the non-peak direction. The LOS for specific movements can be shown as well.

With the expected increases in traffic volumes by 2040, intersection LOS is expected to get worse, as is the average driver delay. The exception to this is the Cedar Lane intersection where the LOS is shown to improve due to ongoing construction of improvements at that location to support the Base Realignment and Closure (BRAC) growth at the Walter Reed medical facility. This specific LOS will be checked with the County and SHA to assure that it matches with their expectations of the intersection improvement project. The LOS operational analysis was accomplished for this presentation using Synchro traffic software with the Highway Capacity Manual (HCM) methodology. In a later stage of the project, the analyses will also be done using VISSIM software, which allows for more sensitive analyses of transit vehicle operations and pedestrian impacts.

Q. *Can you do a comparison chart showing CLV, in addition to the LOS charts?*
R. Yes, this can be done. It should be noted that we used Synchro and SimTraffic to conduct a Highway Capacity Manual (HCM) analysis.

An important measure for users of the transportation system is speed and travel time. Mr. Holcomb presented the Existing and Forecasted 2040 No-Build average traffic speeds and travel times for segments along the MD 355 corridor for both the southbound and northbound directions. The travel speeds and times shown in the presentation include the delays experienced by motorists sitting at traffic signals, so the speeds are below posted/signed speeds that vehicles are travelling between intersections. For both directions on MD 355, speeds are generally slower in the peak direction of traffic flow (southbound in the morning rush hour and northbound in the evening). In 2015, the data show that to travel the entire corridor from one end to the other, it would take a little over an hour in both peaks on southbound MD 355, with that increasing to close to 90 minutes by 2040. In the northbound direction in the evening peak the travel time is shown to increase from 1 hour and 15 minutes in 2015 to a forecast of almost 2 hours in 2040. Average speeds are expected to drop by about 5 mph for travelling the entire length of the corridor between 2015 and 2040. It was noted that few people travel the entire length of MD 355 in one trip, but showing the results for the entire length of the corridor gives a good overall

picture of corridor operations. Travel times and speeds can be provided for other trip lengths, such as between transit stations.

Q. *Calculating a trip time for the entire corridor doesn't make sense because people don't use it that way. Can you look at travel time between projected stations?*
R. We will generate both transit and auto travel times for representative trips.

Mr. Holcomb then presented to the group a summary of crash data that has been recorded along the corridor. Approximately 1,900 police reported crashes occurred along MD 355 between the beginning of 2011 and end of 2013 between the project endpoints in Clarksburg and Bethesda. The crash data displayed the data according to major corridor segments with crashes per mile for those segments, and crash types most prevalent in those segments. Many of the segments show a high number of rear end, left turn, and angle collisions. These types of collisions are fairly typical for congested roads with many access points and high levels of turning vehicles. It was noted that several sections had a relatively large number of crashes involving pedestrians. As BRT options are reviewed, it will be important to identify safety issues.

Additional comments and questions on traffic analysis included:

A Comment on Purpose and Need: *Travel time savings alone will not be adequate as a measure to evaluate alternatives because these numbers won't justify the investment.*

Q. *Does traffic analysis reflect the federal government and other employers promoting telecommuting and mode changes reduce traffic on Mondays and Fridays?*
R. Yes, we typically count traffic during the middle of the week.

Q. *Is any of this data available online/publicly to dig into?*
R. Not at the moment. It may be available later and for the technical-focused meeting.

Q. *We have been given a lot of tables of numbers and would like to advise. It would be helpful to have more information to assess the actual model and methodology at the technical meeting.*
R. The technical meeting and our application of concepts during review of ongoing work will provide opportunities to discuss and advise.

Draft Purpose and Need Language

Mr. Sifuentes presented the Draft Purpose and Need Language for the project. Over the past couple of months the team has been analyzing exiting conditions information related to existing bus service and traffic along MD 355. In addition, information gathered from the CACs on strengths and weaknesses of the corridor and the values and concerns that they have were used to develop this draft language. Many CAC members have already sent us very valuable and useful comments on the draft purpose and need language. We wanted to present this language as draft to be able to receive feedback from the CAC members and then show it to the general public at the Informational Open House. Mr. Sifuentes asked members to continue to submit comments in writing on the draft language that was presented.

Purpose and Need Discussion

Q. *There is a problem with one Purpose and Need being applied to the entire 355 corridor due to the very different characteristics of the northern and southern sections of the corridor. The future BRT is being used to justify not building some roadways that are in the CLRP. I don't want to put out a document that claims to solve traffic problems in Clarksburg, when the frequent service may very well not make it north of Germantown.*

Q. *Another problem is the northern corridor terminus. The BRT can't go north of the bypass, which is south of Stringtown Road. Clarksburg will be better served by double the frequency of Ride On Route 55.*
R. The current study limits reflect the Master Plan.

Q. *The "purpose" stated is to build the BRT. But the actual purpose is to decrease traffic congestion and increase access to transit. The need is the real difficulties people have are getting around in their neighborhoods. The items that are currently in the purpose, such as high speed, high frequency transit, are actually supposed to be part of the solution. I am providing a table of contents from an actual NEPA process, which includes many more items.*
R. As we are still pre-NEPA the Purpose and Need can change.

Running Way

Mr. Sifuentes described that as discussed at the kickoff meeting, a BRT system is made up of various elements creating a menu of options for running ways, service plans, stations, vehicles and technologies. Today we will be discussing the running way options available for this project. The running way describes the physical location of the BRT and the way that it operates in relationship to vehicular traffic. A total of six options have been identified for consideration. At the last meeting we described the existing roadway characteristics and how much they differ along the corridor: from urban to rural, from eight lanes to two lanes. Given the varying nature of the corridor, the proposed six options will be mixed and matched along different segments of the corridor to best fit within the surrounding area. For example, what works in Germantown may not work in Bethesda. The typical sections presented are general in nature and are being used to describe the running way and interaction between general traffic and the BRT vehicle. They are not showing specifically where these typical sections will be applied. NOT EVERY OPTION IS APPROPRIATE FOR EVERY SEGMENT OF THE MD 355 CORRIDOR, he emphasized.

Option 1 – BRT in Mixed Traffic

BRT under this option would operate in mixed traffic with all traffic on the road operating within the existing roadway footprint. The BRT would be subject to the same delay and congestion experienced on the roadway. This BRT option could include enhanced transit features such as fewer stops and minor operating improvements like transit signal priority (TSP). TSP allows a BRT vehicle to communicate with the approaching signal to either extend the green cycle for a few seconds or make the red cycle shorter.

Regarding a Canadian example of a location where BRT is operating in mixed traffic a CAC member asked:

Q. *What is the population of Brampton?*
R. Approximately 500,000 people.

Option 2 – BRT Queue Jump Lanes

BRT under this option would also operate in mixed traffic with all other vehicles on the road within the existing roadway footprint. This option would however include BRT queue jump lanes at intersections where feasible and justified. The BRT queue jump lane would allow the BRT vehicle to get in the front of the queue and through a protected phase get ahead of all other vehicles still waiting at the signal. This BRT option could also include enhanced transit with limited stops and minor facility improvements such as transit signal priority (TSP).

Q. *Does the bus have its own lane?*
R. Only at intersections to allow for the bus to queue jump other vehicles.

Q. *What if someone wants to turn right (where the queue jump is operating)?*
R. If a right turn lane is warranted, the design would ideally allow for right turning vehicles to freely clear a bus stopped at a red signal. If no turn lane is warranted, right turning vehicles would wait until able to complete the turn behind the bus or other traffic.

Several members raised issues that Mr. Sifuentes indicated will be considered during the feasibility analysis. They included:

- *Safety and the need for police enforcement as people adjust to changes in traffic patterns.*
- *Property acquisition needed as a result of queue jumps at intersections.*
- *Right turning vehicles, right turn on red restrictions, and additional queuing at intersections where queue jumps are envisioned.*

A question was asked about concerns with signal priority:

Q. *Please clarify signal priority vs. signal extension. For example, traffic engineers were concerned on the CCT that signal extension would disrupt signal cycles and signal progression along corridor.*
R. Signal operations alternatives will be part of the "build" traffic analysis. The distinction is usually between signal "priority" which involves a response from the signal which is conditional on the overall signal timing cycle being able to handle the adjustment at that moment, and can result in extending the green time or truncating the red; and, signal "preemption' which is not conditional and is typically provided automatically at the time of the "call." Preemption is usually used for police, fire and EMS emergencies.

There were also questions about pedestrian accommodation:

Q. *Will seconds be removed from pedestrian cycle if they're added to the vehicle cycle to get buses through?*

R. Signal phasing will be assessed in traffic analysis, but minimum time for pedestrians to cross must follow established industry standards. Wider crossings can create longer signal cycles which on MD 355 today are already considerable.

Option 3 – One Way, Reversible, Dedicated BRT Lane

This option would provide a lane dedicated to the BRT. Directionality of the dedicated BRT lane would be determined by peak hour demand. Peak direction BRT buses in the one-way reversible lane would stop at new BRT stations, while off-peak direction BRT buses would operate in mixed traffic and could use existing bus stops retrofitted for BRT. The dedicated lanes can be achieved via an additional lane or repurposing of an existing travel lane.

Under the first scenario an additional lane would be added to the existing typical section and would be dedicated to the BRT buses. Under the second scenario, an existing travel lane in the off peak direction would be repurposed and dedicated to the BRT. When the peak directionality changes, the BRT lane would switch. An example was shown for the AM peak with a strong southbound peak direction. In the AM peak a northbound lane would be repurposed and dedicated to a southbound BRT. In the PM peak a southbound lane would be repurposed and dedicated to a northbound BRT. This operation would be similar to the existing conditions on US 29 inside the beltway, where an additional lane is given to the peak direction. However instead of giving this lane to general purpose traffic, the lane would be dedicated to the BRT.

Option 4 – Bi-directional, Dedicated BRT Lane

Similar to Option 3, this option would provide a dedicated BRT lane. However instead of only allowing peak direction BRT buses on the dedicated lane, buses travelling in both directions will be allowed to use the lane. BRT buses traveling in both directions share a single lane that would have passing zones to maintain operations. The dedicated lanes can be achieved via an additional lane or repurposing of an existing travel lane. Under the first scenario an additional lane would be added to the existing typical section and would be dedicated to the BRT buses. Under the second scenario, an existing travel lane in the off peak direction would be repurposed and dedicated to the bi-directional BRT. When the peak directionality changes the lane that is dedicated to bi-directional BRT travel would also switch to flow in the direction of peak travel. An example was shown for the AM peak with a strong southbound peak direction. In the AM peak a northbound lane would be repurposed and dedicated to the bi-directional BRT. In the PM peak a southbound lane would be repurposed and dedicated to the bi-directional BRT. This operation would be similar to the existing conditions on US 29 inside the beltway, where an additional lane is given to the peak direction of traffic. However instead of giving this lane to general purpose traffic, the lane would be dedicated to the BRT. Pictures of an existing bi-directional BRT system were shown to the group.

Questions about Options 3 & 4: One way, Reversible or Bi-Directional, Dedicated BRT Lane

Members indicated concern about the impacts of center stations located in the medians along MD 355. Concerns included:

- *Loss of pedestrian refuge space.*
- *Property impacts both of both private property and for existing right-of-way that is currently in use by adjacent commercial property owners.*

- *Left turn restrictions both from the travel way and from commercial businesses along the road.*
- *Left turn queueing at intersections which already spills back into travel lanes at some cross-streets in the corridor.*

Q. *So all of the turnouts from strip malls would be closed?*
R. Yes, for a dedicated median option all the mid-block unsignalized crossings would be gone, and all vehicles would have to turn at a light.

More questions arose as the members wanted to be sure they understood exactly how the bi-directional lane concept would operate:

Q. *Which direction would use the dedicated lane when there is no clear peak demand? Are they both in mixed traffic?*
R. Once you have a dedicated bus lane, you'd want to always be using it. So it would take further analysis to determine which directions should use the lane and when.

Q. *So buses will have to wait for each other in a bi-directional lane option?*
R. Possibly. But a bi directional option could be used to bridge gaps in constrained areas, and would include passing zones (like those shown in the Eugene, OR example in the presentation).

Option 5 – Dedicated Median BRT Lanes

Under this option BRT buses would operate in dedicated lanes located in the median. This option would provide the highest level of service compared with other BRT options since the BRT would operate in the median with minimal conflicts with existing traffic. However by being in the median, left turn movements would only occur at signalized intersection or under a protected movement. Many of the existing mid-block crossing along MD 355 would need to be closed and the movements relocated to the nearest signalized intersection. Traffic analysis would need to be conducted to determine how much longer the left turn storage will need to be. The dedicated lanes can be achieved via additional lanes or repurposing of existing travel lanes. Under the first scenario two additional lanes would be added to the existing typical section and would be dedicated to BRT buses. Under the second scenario, two existing inside travel lanes would be repurposed and dedicated to BRT buses.

Option 6 – Dedicated Curb BRT Lanes

Under this option BRT buses would operate in dedicated lanes located curbside. Since the dedicated lanes are on the outside nearest to the curb, these lanes would have to be shared with local buses and all right turn movements to and from MD 355. This reduces the efficiency of the BRT travel times. The dedicated lanes can be achieved via additional lanes or repurposing of existing travel lanes. Under the first scenario two additional lanes would be added to the existing typical section and would be dedicated to BRT buses. Under the second scenario, two existing outside travel lanes would be repurposed and dedicated to BRT buses.

In response to what will be studied and when, Mr. Sifuentes provided the following responses:

- Options will be applied to various sections along the corridor in upcoming work.
- Issues related to each intersection are being inventoried and will be considered as each concept is developed.

- Current work is assessing options from operational standpoints. We are beginning with an evaluation of the Master Plan concepts. If alternatives are not realistic due to significant property or other impacts they will not advance as an alternative and no cost analysis will be performed.
- Headway alternatives will be developed for testing results as part of service planning.
- Costs will also be developed only for alternatives that will be investigated during this phase of the study, and are anticipated to be available in the spring of 2016.

A request was made to the team to provide a study schedule.

General Question and Answer Session

In response to a request to provide an example of which running way options might be applied to MD 355 through the City of Rockville the team discussed the fact that this study will rely on work currently underway by both Rockville and Gaithersburg. These studies by the two municipalities will be important to guide the State and County study effort. The municipal plans are expected to have results to share in the fall of 2015.

Barry Gore from City of Rockville noted that any alternative will require tradeoffs. Some loss of left turns and such may be acceptable since many of these movements are impractical on Rockville Pike anyway. He gave an example from his experience with the Minneapolis - St. Paul Light Rail. Communities there supported removing on-street parking along the entire route so the light rail could fit because they felt that loss was worth the benefit of having the new service. The light rail project would not have been possible without the space provided by eliminating the parking lanes.

Joana Conklin also provided an update on the newly reconstituted Transit Task Force:

- There are two work groups, one on finance and one on organization and transfer of functions.
- A public forum is scheduled on June 17th. The forum will enable interested parties to express their views on subjects now before the Task Force so that those views may be a part of the record.
- The Task Force will be putting together its report for September delivery to the County Executive.

Next Steps

Mary Raulerson asked CAC members about their level of interest in the technical meeting proposed. About half of those present indicated a strong interest in this meeting.

Members should stay tuned for upcoming meetings that will be scheduled specifically including:

- Technical Meeting to delve into the details and assumptions underlying the travel demand forecasting presented and discussed during tonight's meeting; [Post meeting note: The technical meeting is an added CAC meeting.]
- A future CAC meeting will review and discuss information to be presented at the fall public open house; and,
- The Public Open Houses in the fall will likely be held in two locations, one in the north portion of the corridor and a second in the south. The same information will be shown at both meetings.