



**Area Advisory Committee Three
Meeting #3
Monday, August 25, 2014
Ingleside at King Farm - 701 King Farm Boulevard
Rockville, MD 20850**

Attendees:

Members

Alan Kaplan	Arlene Robinson
Marilyn Leist	Fred Samadani
Martin Mankowski	Gail Sherman
Scott Maravilla	Mel Willis
Timothy McDonald	

Apologies

Marcia Bond	Kevin Johnson
Gerald Calderone	

Staff

Facilitator – Tracee Strum-Gilliam	Public Involvement Task Lead – Crystal Saunders
Project Manager - Rick Keigel	City of Rockville - Emad Elshafei, Katie Mencarini, Daniel Seo, Craig Simoneau
Station Architect – Kyle Kramer	Montgomery County DOT – Joana Conklin
Traffic Engineer – Kevin Permisohn, Elizabeth Andrew, Ginny Roach	M-NCPPC - Nkosi Yearwood
Segment Engineer – Allison Berkheimer, Christine Sutkowski	Project Staff – Kyle Nembhard
Urban Design - Seth Garland	Logistics Staff – Jordan Vann

General Public

Mark Scoffield, Ingleside at King Farm	John Zuk, Regency Centers
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Handouts:

- Traffic 101
- How the VISSIM Model Works
- King Farm Boulevard – Turn Lane: Adjacent Lanes Without Separation
- Adjacent Transitway Model
- King Farm Boulevard – Mid Block: Adjacent Lanes Without Separation
- Adjacent Transitway Model
- Sequence 1: Main Line Sequence 2: Side Street Sequence 3: CCT Phase
- Traffic Analysis Results: Intersections Along King Farm Boulevard.

Introductions:

Tracee Strum-Gilliam thanked everyone for coming and asked everyone to introduce themselves and provide an overview of their role on the project or note if they were a member of the committee. Tracee explained that the agenda was lengthy and the focus of the meeting would cover traffic considerations for the project from 6:30 to 8:30 PM.

Tracee also explained the contents of the packets that were distributed for the committee's review. She requested feedback on the June Walking Tour by Wednesday August 27th at close of business.

Follow-up Items from Last Meeting:

AAC Three Meeting Schedule

Tracee explained that the next meeting would be held on September 22nd and would cover the topic of Urban Design and Stormwater Management. She then stated that the fifth AAC Three meeting would be held on November 3rd and that Station Design would be the focus.

Walking Tour Summary

Kevin outlined some of the feedback that the team received in response to the two transitway cross-sections that were previously discussed. Kevin explained that the team was moving forward with the adjacent transit lane option which would preserve the grassy median although it would be narrower than it is today. He explained that this conclusion was drawn based on feedback from the committee and the project team.

Traffic Overview:

Kevin explained that the traffic team's role is to determine the impacts associated with the construction of the CCT in regards to traffic operations as well as the physical design of traffic control devices. He shared how the traffic team considers the placement of physical infrastructure aspects such as signals, signing, and striping. The team also analyzes operations for both motorist and transit vehicles, in order to optimize travel time and performance for all modes.

As part of the discussion, Kevin explained the effects of traffic analysis on the project's geometry in terms of engineering design. He also noted that traffic considerations play a role in determining median closures with the primary motivation being safety to both motorists and transit vehicles.

Kevin explained to the committee that traffic analysis results play a role in other modeling efforts performed by other disciplines such as ridership forecasting and bus operations to determine headways and the number of buses needed, thus helping to understand the size needed for the operations and maintenance facility. As well, the traffic results are used in the air quality and noise models.

Traffic Analysis and VISSIM Modeling:

Kevin explained how the traffic team uses VISSIM (a computer simulation model) to conduct an analysis of the effect of the CCT on the existing street network. He also outlined how VISSIM works and how the team is able to analyze various scenarios to predict what the conditions will be in the future.

Kevin noted that the conditions modeled involve a base year of 2010, opening year of 2020 and future build year of 2035. Kevin pointed out how the project team uses this information to plan for accommodating growth in travel demand. He also explained that they compare both build and no-build scenarios.

In order to help the group better understand some of the terminology he would be using to discuss the various traffic topics, Kevin referred to the *Traffic 101* handout that describes some terms that the team commonly uses when discussing traffic analysis.

Kevin then shifted the discussion to the topic of how the team analyses data using VISSIM and traffic counts. He explained that analysis results are reviewed based on metrics such as travel time, delay, level of service and queues lengths. He then explained to the committee that the traffic team field verifies the VISSIM model for real-world conditions. Kevin also noted that the team had visited King Farm to personally observe various traffic conditions during both peak and non peak hours as suggested by the committee in previous meetings.

Decision-Making Process:

Kevin noted that the CCT traffic team coordinates with various agency stakeholders on a monthly basis along with internal team members from multiple disciplines on a bi-weekly basis (if not more frequently) to make sure all needs are met when making decisions about elements of the project. He also mentioned that input from the AACs is considered and used to help make project decisions. Kevin pointed out AAC Three's unique position of being able to influence the project's geometry with regards to King Farm Boulevard. He noted that given the AAC's input, the team moved forward with selecting the adjacent transit lane option. Kevin emphasized to the group that no other AAC had the opportunity to influence the typical section throughout the rest of the corridor to this degree.

Key Decisions:

To provide some examples of decisions that were influenced by the traffic results, Kevin explained how a few major intersections along the corridor, including MD 355 at King Farm Boulevard, were studied for the feasibility of at-grade vs. grade separated crossings based on the impact to existing traffic and potential delay to the CCT. Kevin also talked about the concept of Transit Signal Priority, coordinated signal systems, addition of dedicated turn lanes as well as other decisions that were made.

An AAC member asked if the team has used the VISSIM model to test traffic conditions with all median crossings open. Kevin explained that a number of different scenarios were modeled which included a different number of median closures but an alignment maintaining all median openings was not analyzed due to the negative results to general traffic and to bus travel times that were observed from some of the scenarios. Kevin added that there was up to five minutes of added delay to the bus as a result of opening more medians in some of the options analyzed. Also, since every open median would require a signal (some existing and some new), additional delay was imposed on the general motorists.

Another member asked how the team accounts for occupancy or the lack thereof of office buildings in the area, specifically in the vicinity of Irvington Commercial Center at King Farm. Kevin explained that the team uses the MWCOG model which has growth rates associated with it based on future planned developments. Those growth rates are applied to the modeling assumptions.

The AAC member followed up with another question regarding how one could get notice of the stakeholder meetings and when they can be attended. Rick Kiegel explained that agency coordination meetings are typically not open to the public. He added that any public settings involving stakeholders are open to anyone to attend.

Alignment Traffic Control:

15% Design Alignment

Kevin walked through the alignment and provided an overview starting from Shady Grove Metro Station and working west toward I-270. Kevin pointed out the proposed median openings and closures and associated signals and midblock pedestrian crossings.

Updated Typical Sections

Kevin discussed the typical treatment of intersections including lane use and pointed out how the lane configuration and operations for general motorists will not change from how it is today. He also explained how the buses will be separated from the general purpose lanes. Rick Kiegel noted that the change in striping will help indicate the delineation of the transit lanes from the general purpose lanes for the drivers. He also mentioned how it doesn't require any further widening. Kevin pointed out how the traffic team has not entertained rumble strips between the transit lane and general traffic lanes due to the community's concern regarding additional noise.

Signalized Intersections

Kevin re-iterated the concerns expressed in the previous meeting with regards to the crossing of King Farm Boulevard by vehicles and pedestrians and how the team looked at ways to make adjustments to accommodate the concerns/suggestions.

Kevin referred to the King Farm Boulevard – Turn Lane: Adjacent Lanes Without Separation handout to discuss the typical section. Kevin explained how providing a shared left/through lane, under the new typical section, allows for left turns to be maintained along eastbound King Farm Boulevard to Grand Champion Drive and along westbound King Farm Boulevard to Pleasant Drive which wasn't available in the previous proposal. Kevin also noted that whenever there is a situation where a vehicle could conflict with a CCT vehicle, it will be signalized in the interest of safety.

Kevin noted that the project is “pushing the limits” with regards to signal spacing policy. Kevin explained how industry standards of practice recommends signals should not be placed within ¼ miles of each other when in a coordinated system, as it will be implemented along King Farm Boulevard. Most of the proposed signals on King Farm Boulevard are within three to four hundred feet of each other.

Kevin also discussed the topic of signal phasing and outlined the process for various phases of a traffic signal with the CCT in place. He demonstrated how the CCT vehicles will have their own phase protecting motorists at intersections when they need to cross the median/transitway. Kevin also explained the concurrent protected pedestrian phases with King Farm Boulevard and cross streets.

Before proceeding with the discussion, Tracee asked if the group had any questions concerning what has been covered so far.

One AAC member commented that if a motorist is trying to make a left turn in front of the bus lane, it is a risky movement given the way he has observed motorists in the area.

Kevin re-iterated that there will be a separate signal indication for the buses and that the bus will always have a red indication and will not be allowed to proceed when vehicles need to drive across the transit lane.

An AAC Member suggested that a wider median would be needed in order to make the radius for the left turn. The member further suggested that something a little more pronounced would be needed so people know what to do, suggesting a raised area to encourage motorists to make the left turn properly.

Adding to the discussion, one member asked how far back buses will have to stop at the intersections. Kevin assured the committee that the team will look into accommodating site distances but noted that this is a drawback to the selected cross-section. An AAC Member observed that the proposed scenario at the intersections resembles what exists now but the stop bar can be moved back.

Rick Kiegel added that moving the stop bar back is a good suggestion, especially since it has no impact on the operation of the CCT or general traffic. Allison Berkheimer added that this would be applied at every signalized intersection and no parking will be removed at any of the intersections.

Tracee re-iterated that the team is listening to AAC Three's comments, questions and concerns, and that they have traveled the routes that the committee members expressed concern about. Some of the design changes incorporated into this plan is a result of committee comments.

Mid-block Pedestrian Crossings

Kevin referred to the King Farm Boulevard – Midblock: Adjacent Lanes Without Separation handout to demonstrate the typical section. Where proposed, most mid-block intersections will have one crosswalk across King Farm Boulevard but some will have two. Kevin pointed out that the team proposed crosswalks on both sides of Crestfield Drive because it currently provides access to businesses. Kevin also cited that the suggestion of bump outs for pedestrian crossings was provided by an AAC member during the walking tour and will be implemented into all mid-block crossings.

An AAC Member suggested the consideration of bump outs at all of the intersections. In response, Kevin noted that it would restrict right turning vehicles on the approach side of the intersection and could prohibit through vehicles from pulling around a left turning vehicle. Another AAC Member asked if the bump outs reduce the number of lanes crossed and Kevin confirmed that this was the case and that the crossing distance of pavement (two lanes) would be no different than it is today at the unsignalized intersections.

One AAC Member asked if there are signals at any of the midblock crossing and Kevin explained that no additional signals will be added where there is a pedestrian-only crossing of the transitway. Another AAC Member asked if the bus has to stop at the pedestrian crossing. Kevin cited Maryland law which requires all vehicles to stop when pedestrians are in the crosswalk.

The conversation reached the area of East Gaither Station. Rick Kiegel pointed out that the original proposal was to construct a secondary station entrance at the opposite end of the median block at Grand Champion Drive. However the design team has revised its design and this access point now ties in the midblock crossing at Havencrest Street. This change will provide more green space between Havencrest Street and Grand Champion Drive.

Signal Operations Overview

Kevin explained the various phases of a typical traffic signal along King Farm Boulevard. Kevin started with describing the handout with Sequences 1 to 3. Sequence 1 in the handout demonstrates how general motorists along King Farm Boulevard will have a green signal in the first phase. The CCT will be stopped and will have a separate signal indication which is unique to BRT systems. Kevin noted that an additional sign was not shown in the drawing but would be present once the system is open that alerts motorists of the “bus signal”. The side streets will also be stopped with a red indication.

Kevin explained how Sequence 2 would provide a green light for the side streets. King Farm Boulevard and CCT would be stopped during this phase. Kevin noted that one thing not shown is the intent to not restrict right turns on red. Pedestrian movements will also be protected when crossing King Farm Boulevard.

Kevin proceeded to describe Sequence 3 which would be the CCT-only phase. Kevin described that for the BRT, a vertical line would be the green light equivalent. During this phase, all other traffic would be stopped. Kevin also noted that other than the CCT phase, the signal phasing/operation would be the same as it is today.

One AAC member commented that they observe motorists using their horns as some drivers turning left across the median are not aware that they can proceed through the red light after yielding to traffic. The member asked if there is a way to provide clearer indication for unfamiliar drivers. A representative from the City of Rockville commented that the signs already indicate to the driver what they are supposed to do and there is no other easy language to explain what to do there.

Another AAC member asked about sequence 3 and whether or not the side streets are concurrent? The member also asked if the side street traffic could turn when the bus is coming. The member also suggested that this would give pedestrians a little extra time when crossing and allow the pedestrian to move out of the driver’s blind spot.

Another asked if the nature of Gaither Road is going to change as it currently has concurrent through and left turns in the existing condition. Kevin pointed out that this is an existing issue that the City of Rockville is aware of and that the CCT project will not affect conditions along Gaither Road. Kevin further explained that the King Farm Boulevard movements at Gaither Road currently operates in what’s called a split phase. Thus, eastbound and westbound movements along King Farm Boulevard operate at separate times so the movements do not conflict. Kevin added that the team is still looking at this intersection in the models to determine the best phasing for the future condition with the CCT present and understands the concerns of the Committee about turning movements at Gaither Road.

Intersection by Intersection Details:

Kevin started explaining the Traffic Analysis Results: Intersections Along King Farm Boulevard handout stating that the no-build model was compared to the build model. He also explained how the project team is responsible for mitigating the impacts the project has on traffic. Kevin also noted that this is based on projected 2035 conditions.

Kevin started from the east at MD 355 and re-emphasized the importance of agency coordination between the City of Rockville, SHA, Montgomery County DOT and MTA involvement in the project.

Rockville Pike/ MD 355 – Kevin explained the proposed exclusive left-turn phase from King Farm Boulevard and from the Metro at MD 355.

One member noted that the centerlines for Metro Access Road and King Farm Boulevard are not aligned with each other and asked if that issue will be addressed during construction. Rick Kiegel assured that the team will try to align the centerlines of the two streets as best they can.

One member asked if there anything that can be done with the traffic that is heading west making the left turn coming out of Metro Access Road. Kevin explained that under the current project design, this turning movement will have exclusive left turn lanes with a protected green arrow. This new signal phasing also allows the CCT to run parallel with the through movements between King Farm Boulevard and Metro Access Road.

One member wanted to clarify if the receiving lane would continue on the other side and Kevin confirmed that this would be the case.

Elmcroft Boulevard – Kevin noted that the median crossing will be closed as previously explained.

Grand Champion Drive – Kevin explained how the initial proposal eliminated left turns for vehicles traveling in the eastbound direction but has since been updated to restore left turns at this intersection. The signal will operate similar to the Reserve Champion Drive example that was provided earlier in the meeting with a three phase operation. Grand Champion Drive will no longer be the secondary entrance into the East Gaither station.

Havencrest Street – Kevin noted that a new mid-block crossing will be provided at this intersection and that the re-working of the design has increased the green space on the block compared to the original proposal. Kevin noted that the new crossing will not be signalized. He also explained that the crossing would be on the east side of Havencrest Street with bump outs and would serve as a secondary entrance to the station.

Pleasant Drive - Kevin noted that earlier proposals restricted left turns in the westbound direction but the team was able to bring the left turn movement back by modifying the lane use to provide a shared left/through lane which is the same lane usage as existing conditions at the intersection.

Crestfield Drive – Kevin explained how the original proposal kept Crestfield Drive open but given feedback from community and by being able to provide lefts at Pleasant Drive in the westbound direction, it was determined that Crestfield Drive would be closed.

One AAC member asked if there would be a pedestrian crossing. Kevin confirmed that would be one and noted that the crossing would not be signalized. Another AAC member observed that there are a lot of vehicular crossings at Crestfield Drive. Kevin agreed and added that after modeling these crossings, it was determined that all of the median crossings could not be kept open due to the increase in delay that the signals would have on both motorists and buses by being spaced so closely to each other. Kevin noted that there are also drawbacks to closing Crestfield Drive since it provides access to Redland Boulevard where there is an existing signal. One member commented that Crestfield Drive goes through a parking lot and observed that they nearly get run over in the parking lot.

Allison Berkheimer commented that the Crestfield Drive median opening was not originally in the developer's site plan. She explained that this was another factor that was considered when selecting this

option. An AAC member commented that they believe the fire marshal requested that it be added to add another route into the village center.

An AAC member asked if these CCT plans have been discussed with the fire marshal and Allison assured the group that the team intends to coordinate with the local fire marshal and fire departments. One member commented that the team needs to coordinate with the fire department as they are concerned about turning radii.

Gaither Road – Kevin explained that the team modeled the intersection at King Farm Boulevard a few different ways. He further explained the technical challenges of Gaither Road being the main line and not having as much time to distribute between the general traffic lanes and CCT. Kevin also emphasized how the traffic team will still update the committee as progress is made.

Ingleside Entrance East – Kevin explained that a new signal is being proposed as presented at prior meetings. This intersection provides access to the Ingleside garage as well as the businesses to the south.

Ingleside West (front entrance loop) – Kevin explained that the team is proposing to close the median crossing and provide a mid-block pedestrian crossing. Kevin asked the group for a preference of east versus west side for the crosswalk.

An AAC member asked if it was possible that the fire marshal wanted that crossing there because of the possible need to access Ingleside directly.

One member asked if the crossing was part of the original site plan. Allison confirmed that this crossing was not in the original site plan. One member commented that if it wasn't the emergency exit, they would agree with the team's assessment. The member further suggested that the team make sure the fire department thinks that's ok.

An AAC member commented that emergency services were a consideration during the site plan development. It was also mandated by the City of Rockville. The member added that there were a lot of options created by putting the median cuts in. Another AAC member asked if the team looked at the bus stops along King Farm Boulevard and that there is one on both sides. One member commented that residents frequently use the one on the opposite side of Ingleside so they need that median crossing. Rick described the location of the bus stop for the rest of the group.

One AAC member asked if the team has done any traffic counts at these medians and Kevin confirmed that counts have been conducted at every intersection. He also noted that the team has volumes for both existing and projected build year conditions.

An AAC member commented that the other issue is the loading docks of the two office buildings on the west side on Ingleside.

Irvington Center – Kevin explained that the team was unable to maintain the median opening due to the location of the station. Kevin noted that the intersection would be treated similar to Havencrest Street with a mid-block pedestrian crossing that would act as the secondary entrance to the station.

Piccard Drive – Kevin explained that a new signal would be installed at Piccard Drive with a shared left/through lane similar to the typical presented earlier in the meeting.

Sheraton/Roundabout – Kevin explained how the new configuration will bring traffic heading in the westbound direction in at a right angle with respect to the transitway. Traffic will be controlled with a stop sign and motorists will only be able to travel south across the transitway and will not be allowed to head north.

Rick added that high traffic volumes are not anticipated at this location.

Other Items:

Tracee opened the meeting up to questions from the general public that attended the AAC Three Meeting as well as additional questions from the AAC members.

One member asked how the project will mitigate stormwater management as the current stormwater management only accommodates current conditions. Allison explained how the team coordinated with the designer of the existing facilities and that a future meeting will have a stormwater management expert attend to discuss it in more detail.

Another AAC member asked if the traffic sequencing will be timed and if the CCT phase will always come up even if a bus isn't present. Kevin noted that the only time the dedicated CCT phase will come on is when a bus is present.

One attendee asked about uncontrolled pedestrian crossings as there is potential for traffic backup based on the speed at which pedestrians clear the crosswalk. It was noted that the design would include pedestrian refuge areas and crosswalks to reduce crossing length at intersections.

Another AAC member asked if there is a chance that additional median closures are phased in based on increase in ridership. Kevin explained that the project is only in 15% design right now so it is still too early to answer that question. Rick also added that based on the changing of priorities and conditions, the team feels that if the closures are not put in now, they wouldn't be put in later.

When asked if the team developed a model that maintained all existing openings for side streets, the CCT team responded that such a model was not developed. It was noted that the travel time for a CCT vehicle along King Farm has increased by about 2.5 minutes given the following conditions which are included in the most recent model:

- The adjacent transit lane with the shared left/thru lane for general motorists
- Restoration of some of the left turn movements at specific intersections such as Pleasant and Grand Champion Drives
- The proposed median openings/closures that are shown on the 15% design plans (and as presented at the meeting)

The team is currently looking into ways of reducing the travel time with transit signal priority techniques and signal coordination.

One AAC member asked if the team considered the indirect impact to Redland Boulevard. Kevin explained how Redland Boulevard is included in traffic models for the project. He mentioned that traffic on Redland Boulevard and MD 355 does affect the rest of the network and sometimes cause intersections like Gaither Road to back up. He pointed out that these impacts are going to occur based on growth in general, with or without the CCT. The member added that the issue right now is with cut-through traffic. The MD 355/Redland Boulevard intersection doesn't allow left turns to the south except buses, forcing

additional traffic to cut through King Farm Boulevard. The member also said closing the median in certain areas will move even more traffic to Redland Boulevard.

Rick asked if an analysis can be done that expands the model to Redland Boulevard to help understand the effects on Redland Boulevard and Kevin confirmed that we can look again at the model to make sure it represents existing conditions but that the local jurisdictions should get involved if there is an existing issue that needs to be resolved.

Next Meeting Information:

While closing the meeting, Tracee reminded the group that comments on the June walking tour are due at the close of business on Wednesday, August 27th. The team will send the final meeting summary following week. Tracee thanked everyone for coming out, as well as Ingleside for their hospitality.

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