

Purple Line on Wayne Avenue: Questions from the Community

Joint meeting of the Park Hills Civic Association & Seven Oaks Evanswood Citizens' Association
May 22, 2017 – Silver Spring Civic Center

Transit Planning & Traffic Engineering

Q1: The recent redesign at the Riverdale Station ([in which the state and PG county kicked in an additional \\$8 million](#)) shows that there are ways to add money to the project to make the environment better -- who do taxpayers need to talk to in order to get the power lines buried underneath Wayne Ave to do that?

Response:

Burying power lines along Wayne Avenue would be considered a “betterment”, which is not part of the current project budget and cost. Montgomery County would need to submit a change order request to the MTA for this work. If PLTP determines that they would be able to complete this work along with the Purple Line, Montgomery County would be responsible for paying the additional cost of this work.

Q2: What is the current plan for the traction-power substation planned for the Wayne Avenue community, and where exactly will it be located?

Response:

Current plans show the traction power substation (TPSS) at the Silver Spring International Middle School (SSIMS), in the same location behind a screen wall as shown in presentations made to the community over the past few years. The MCPS Board of Education must approve the location of the TPSS on school property.

Q3: Is it true (so I have heard) that the substation is now a different size – if so, what will be the dimensions?

Response:

Standard Purple Line TPSSs are approximately 58 feet by 18 feet and will be fed by underground electrical feeds.

Q4: Is it also true that the voltage of this newer design has increased from 750 volts to something closer to 2X that amount?

Response:

The TPSSs will operate with 1500VDC which allows the voltage to travel further and reduce the number of TPSSs along the alignment.

Q5: When will MTA/Purple Line Partners address extensive neighborhood concerns about the size of the roadway and particularly objection to making it 7 lanes instead of the advertised 4, so as to include dedicated turn lanes not in the original plan?

Response:

Wayne Avenue is a 4-lane roadway where the Purple Line travels. For a number of years, MTA has made presentations to the public that make it clear the roadway would be widened to

accommodate the Purple Line station and additional left-turn lanes. However, in response to community feedback, the MTA/PLTP and Montgomery County have worked together to assess and incorporate various design options that reduce the amount of additional width required at this intersection. For additional details, please refer to the roll plan link at www.purplelinemd.com.

Q6: Is it true that the contractor (i.e., Purple Line Partners) can pull out at some point if the lawsuit keeps delaying the project start? Or, does the contractor simply increase the cost?

Response:

Yes, both parties have the option to terminate the contract at any given time.

Construction

Q1: What is the earliest and latest on the day construction and related activities will occur?

Response:

We will try to ensure that as much work as possible is completed during day shifts. However, we may also work night shifts in order to stay on schedule and/or accommodate daytime activities at a particular location. We may be working both day and night shifts, but will try to ensure as much work as possible is completed during day shifts, but that will not always be possible. A 7 a.m. start for day shift should be expected. We would follow the notification requirements for any night work.

Q2: Will there be any klieg lights used at night?

Response:

Yes, if necessary.

Q3: What steps will be taken to keep any night lights from disturbing people living in the homes nearby?

Response:

Lights will be pointed on the ground and shielded so that glare should be minimized. If residents are disturbed by lighting, they should call 240-424-5325.

Q4: What hour restrictions on noisy activities will be in place to protect the neighbors?

Response:

PLTP will follow noise limitations set by the county and will work to reduce noise during night hours.

Q5: What process will enable neighbors to get immediate relief from excess noise, dust, and light, operations outside of normal hours, or other issues that may arise?

Response:

Anyone with issues/concerns related to project construction is encouraged to call the Purple Line 24-hour Construction Hotline at 240-424-5325 or fill out a concern form located under the construction tab on the project website at www.purplelinemd.com

Q6: Will police be stationed at the construction to direct traffic? [Recent experience with the building on Bonifant, a small street, has been horrible. I have been directed to go at the same time as a driver coming in the opposite direction when travel was restricted to one lane, I have been given hand signals indicating stop and go at the same time, etc. On a street with the traffic of Wayne, there need to be police, not construction workers, directing traffic for public safety.]

Response:

PLTP will employ certified flaggers to help direct traffic in the case of lane closures and diversions. There are some cases in which PLTC would use police, but these instances tend to be at night and for complicated traffic switches.

Q7: What temporary measures will be in place to ensure construction traffic doesn't overtake residential streets nearby?

Response:

PLTC instructs all subcontractors and workers to park in designated project parking areas detailed in the project orientation. Should residents see any workers they believe to be associated with the project parking on local streets (if permission has not been coordinated through the outreach team) they should take as much detail down from the vehicle, pictures will work too, and call 240-424-5325.

Q8: Has MTA ever released its Construction Execution Plan (a document that community members have asked about last May, as this report spells out exactly what the PL Partners will be required to do during construction)?

Response:

The Final Montgomery County PEP was submitted and MTA is awaiting comments.

Noise & Vibration

Q1: The design of the new train (139 feet in length, approximately) is very different to what has been proposed before, and is basically an unprecedented design as a comparison to other light rail trains. Hence, what are the differences regarding the acoustical effects this new design makes compared to the old design?

Response:

The train length is not unprecedented. 5, 7 and 9 module streetcars run all over the world with lengths up to 183 feet including:

- 5 Modules: Edinburgh (UK), Birmingham (UK), Seville (Spain), Sidney (Australia)
- 7 Module: Luxembourg, Brussels
- 9 Module: Budapest (Hungary), Strasbourg (Austria)

The original MTA concept was to run two-car train of approximately 100 feet each, for a combined train length over 200 feet.

Q2: In particular, regarding wheel squeal down Wayne Ave - will the new design have skirts to minimize wheel noise?

Response:

Yes, skirts will be on the vehicle

Q3: Will the newer light-rail model be louder or quieter than the original trains?

Response:

No change is expected with the change of vehicle.

Q4: In particular, will this newer train model be louder or quieter in migrating noise pollution to its surroundings at the platform?

Response:

No change is expected with the change of vehicle.

Q5: Will sound-absorbing materials be used for the station platform?

Response:

Sound absorption is not needed at the platform.

Q6: What kind of noise monitoring will take place and how frequently?

Response:

During construction, PLTP noise monitoring shall include daily measurements for all above ground noise generating activities and PLTP will conduct additional measurements upon request by MTA and upon receipt of a noise complaint. Prior to construction starting, PLTP will install noise monitors throughout the alignment that are capable of measuring dBA noise levels and displaying Leq and Lmax over 20-min intervals.

Q7: What is the absolute limit on noise?**Response:**

17.4 Maximum Construction Noise Levels

Except as allowed by Part 2A, Sections 17.4.1 and 17.4.2 of the Technical Provisions, the maximum construction noise level for the Project Site, as measured in accordance with Part 2A, Section 17.3 of the Technical Provisions, shall be the more stringent of that provided in the Third Party Agreement Requirements and as stated in Exhibit 17.1.

Exhibit 17.1 Maximum (Lmax) Construction Noise Levels in dBA				
	Monday - Friday		Weekends / Holidays	
	Residential Zone	Non-Residential Zone	Residential Zone	Non-Residential Zone
7:00am to 9:00am	85	85	55*	62*
9:00am to 7:00pm	85	85	65*	67*
7:00pm to 10:00pm	65*	67*	65*	67*
10:00pm to 7:00am	55*	62*	55*	62*

* - or ambient, whichever is higher

Q8: Given the recent damage caused by the recent blasting experience and unexpected range of vibrational impact, how will residents be protected once blasting begins on the tunnel across Sligo Creek near Manchester Road?

Response:

We do not know what is being referred to as the “recent blasting experience”. A request for clarification was submitted to Chris Richardson but we received no response.

Q9: Will the county reimburse residents for home inspections prior to blasting for the Manchester tunnel?

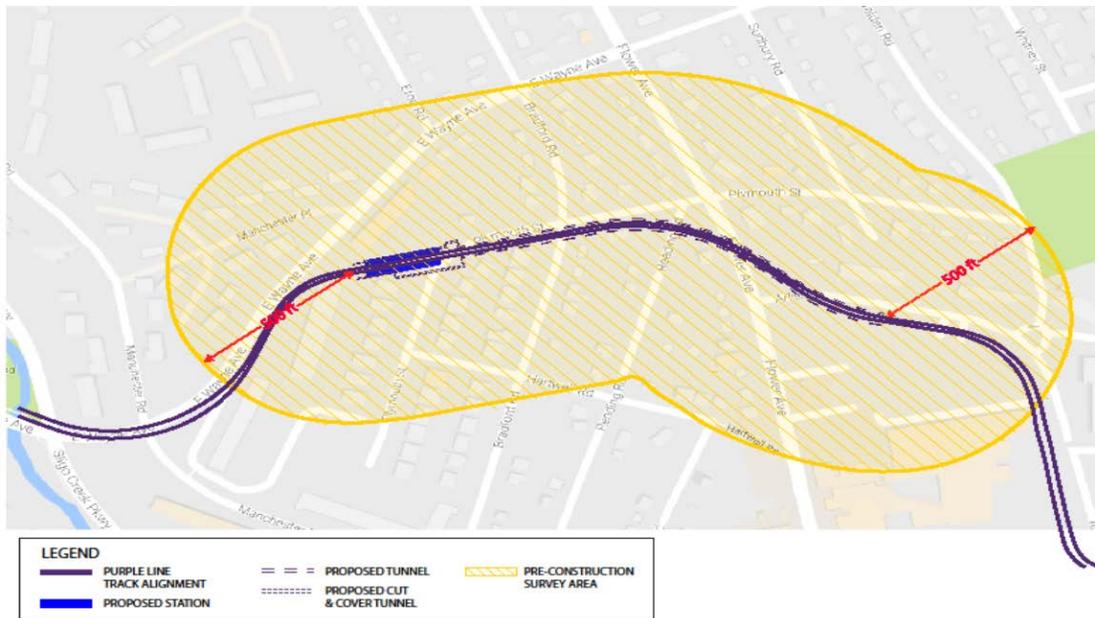
Response:

PLTP will conduct pre-construction inspections at no cost to residents who qualify for an inspection. Qualified residents will receive a letter via mail asking them to schedule the inspection to assess the existing condition of their home and property. PLTP engineers will perform the inspection in the presence of the home owner and a copy of the assessment will be provided to the home owner. Though the inspections are voluntary, it is in the homeowner’s best interest to schedule the inspection so that a baseline condition of the home and property is recorded prior to construction. If the home owner refuses, PLTP cannot process any claims that the home owner may wish to file at a future date.

Q10: What is the range of impact (range of feet in diameter) for residents near the blasting site at Manchester Road?

Response:

Blasting will only occur where needed in the tunnel during day-time hours of 7 a.m. to 7 p.m. Blasting will occur up to two times a day (lasting only seconds). No blasting will occur on weekends. The impact to residents should be minimal and PLTP anticipates no damage. Extensive monitoring will be put in place prior to any blasting occurring. PLTP has established a 500-foot diameter to perform preconstruction inspections around the tunnel area where blasting will occur prior to any start of construction. See drawing below.



Environmental & Watershed

Q1: What is MTA’s stormwater project plan for the Sligo Creek watershed area?

Response:

Throughout the project corridor, the MTA stormwater plan is to implement on-site stormwater management to the maximum extent practicable as required by Maryland Department of the Environment’s (MDE’s) Stormwater Management and Erosion Sediment Control Guidelines for State and Federal Projects. Specific stormwater management practices proposed within this corridor include micro-bio retention facilities, water quality planter boxes, and underground sand filters to maximize on-site treatment within the constraints of the project corridor. Calculation of Impervious Area Requiring Treatment reflects criteria established by MDE specific to the Purple Line Light Rail Project to recognize the inherently green nature of this transit project through an urban corridor. Although State and Federal requirements may be less stringent than County requirements, MTA recognizes the environmental sensitivity of this watershed and will implement stormwater management as feasible.

Q2: Has MTA assessed what trees will need to be cut, and if so – which trees along the residential Wayne Avenue corridor?

Response:

As required per Maryland’s Forest Conservation Act, all forest areas and specimen trees (i.e. trees greater than 30 inches in diameter) have been surveyed within the project corridor. Along Wayne Avenue, there is no forest areas and approximately 40 specimen trees. Currently, 37 of the specimen trees that are within or immediately adjacent to the project’s limits of disturbance are proposed for removal. As addressed in more detail in Question 5 below, PLTC and MTA will be walking the project limits multiple times prior to any tree removal to determine if preservation is feasible through slight adjustments to the LOD

and/or use of additional preservation techniques. In addition, PLTC and MTA will be working closely with M-NCPPC Montgomery County on tree preservation opportunities on Park property at Sligo Branch.

Q3: To the closest approximation, how many trees will be removed in all from the residential Wayne Avenue corridor?

Response:

Refer to Question 2.

Q4: Will MTA/county plant new trees to replace ones removed, and if so, will trees be replaced on-site and reasonably close to where they were removed?

Response:

All mitigation efforts are advancing as required by the State regulations, Technical Provisions of the P3 Agreement, and environmental commitment of the project. Trees that are displaced by construction shall be replaced at a 1-inch caliper to 1-inch caliper rate of replacement.

Obviously, it may not be possible to plant these new trees in the same locations. As part of the P3 agreement, PLTC will be adding over 13 acres of forest areas, in addition to, upright shade, evergreen, flowering trees, shrubs, groundcovers, perennials, and ornamental grasses within the project's corridor. Tree preservation guidelines for National Park Service, National Capital Planning Commission, and M-NCPPC shall also be followed where applicable.

Section 10.4.8 of the Technical Provisions requires that street trees be planted every 30-35 feet as spacing permits. The first priority is to plant 2" shade trees, with flowering or understory trees where vertical or horizontal restrictions limit the use of shade trees.

As per the Forest Conservation Act (FCA), the project is required to provide 75.73 acres of forest mitigation for proposed clearing associated with the Purple Line construction. A minimum of 40 acres of that forest mitigation will be provided at an approved off-site mitigation bank in Montgomery County. Because the Purple Line right-of-way is located within a highly urbanized area, feasible forest mitigation of that size within the same HUC 12 level watershed is not available. However, the forest mitigation is located within the same county and Potomac River watershed as the project, which is in full conformance of the FCA.

Q5: What actions are being undertaken to preserve the maximum number of large trees so as to protect the character of this residential neighborhood?

Response:

As indicated on the Forest Conservation Plan, the contract arborist for the Purple Line project shall verify all tree locations and conditions prior to construction and/or treatment or removal. A pre-construction meeting will also be held prior to commencement of demolition /construction activity to verify which trees are to be removed and which are to be preserved. During the pre-construction meeting, each specimen tree (i.e. trees greater than 30" in diameter) proposed for removal will be re-evaluated to determine if preservation is feasible through slight adjustments to the LOD and/or use of additional preservation techniques. Among those in attendance at the pre-construction meeting will be the Maryland

Department of Natural Resource's Forest Service, PLTC's Licensed Tree Expert (LTE), the LTE from the tree clearing sub-contractor(s), and LTEs and certified arborists from corresponding local jurisdictions, such as Montgomery County, Prince George's County, and M-NCPPC. Reasonable attempts will be made to preserve as many existing specimen trees as possible. It should be noted that the project is confined to a very narrow corridor to reduce impacts to the residents, adjacent properties, and neighborhood trees/forest.

Q6: Has MTA (as Friends of Sligo Creek have requested) decided to use the Montgomery County standards for stormwater projects for new construction?

Response:

As a State of Maryland project, the Purple Line will meet all State MDE requirements for stormwater management. MDE requirements are stringent standards.

Q7: To what extent has MTA done a careful assessment of the project at Sligo Creek and have a plan to protect wildlife in the creek and surrounding area?

Response:

The Sligo Creek area was included in the initial study area where resources such as water quality, aquatic biota and habitat, and terrestrial habitat and wildlife were identified. Since that time the design has been developed to avoid and minimize impacts in the area. Plans in the vicinity of Sligo Creek have and continue to be carefully coordinated with M-NCPPC. This coordination has resulted in specific measures such as tree protection, limits of work in the Creek itself, and improvements to the surrounding wetlands and floodplains. The project also has environmental protection measures including compliance and monitoring requirements which are also developed in consultation with M-NCPPC.

Community Issues

Q1: Will community members be involved in the final selection of public art?

Response:

The Art-in-Transit program has identified selection committees in both Montgomery and Prince George's Counties. For the stations in each county, the Selection Committee includes four community representatives. The Selection Committee for each county also includes representatives from the MTA, PLTP, Maryland State Arts Council, an Art and Design Professional, and an Arts Council representative from the respective county.

In addition, Community Meetings were held in each county where the Artists' conceptual proposals were presented for community input and comment. The Community Meeting to present the Artist proposals for the stations in Montgomery County was held on Tuesday, April 25th at Blair High School. Further, through the Purple Line website, the public was able to view the proposals and provide comments and input. All of the comments generated through the Community Meetings and the website, were provided to the Selection Committee for consideration in their final selection process.

Q2: Will on-street parking remain along Wayne Avenue when the Purple Line is operational?

Response:

Except perhaps immediately adjacent to the Dale Drive Station, where the time restrictions on the south side of the road may be extended, the current on-street parking and associated restrictions will remain once the Purple Line begins operations.

Q3: Will there be a Montgomery county official acting as a liaison for residents?

Response:

In addition to MTA & PLTP's Public Outreach Teams, the Montgomery County Purple Line Implementation Manager, Mr. Tim Cupples is available to assist the community. Mr. Cupples can be reached at tim.cupples@montgomerycountymd.gov

Noise

Q1: The Purple Line Noise Technical Report of October 2013 states on page 15 that in accordance with MTA operating practices, onboard warning devices or bells would be sounded within 5 seconds of the train approaching a station or at-grade crossing, with a maximum noise level of 78 dB(A) at 50 feet, and on page 22 it says much of the noise impact is derived from the use of transit warning horns at stations and crossings, and eliminating the transit horn is not possible due to safety concerns. Are these correct statements?

Response:

MTA has established a Horn and Bell Policy for the Purple Line, which indicates that trains will not be sounding horns or bells as they travel along Wayne Avenue, including as trains proceed through signalized intersections or crossings, except for two exceptions explained further. Trains would only sound their horn in the case of an emergency. Trains will sound a bell, which are not near as loud as a train horn, as they are entering and exiting a station platform area. The Technical Report was developed prior to the adoption of the Horn and Bell Policy. For this reason it assumed a "worst case" scenario for the noise analysis.

Q2: Audible warnings are present in similar light rail systems in residential areas, including the recent Denver installation of the same system. In that location, there was a lawsuit and a judge ruling that (1) not having an audible warning was not sufficiently safe for the blind or for children at the intersection, and that (2) loud horn and warning bell sounds was not an acceptable impact in residential neighborhood. The agreed solution is a combination a low-noise alert and crossing gates. Will these same efforts be made in residential crossing, particularly on Wayne Avenue? And does Purple Line Transit Partners recognize the risk and assume the liability if it is not?

Response:

Please see response above regarding the use of train horns and bells. Crossing gates are not being built along the Wayne Avenue section of the project. Crossing gates are not needed along Wayne Avenue largely due to the low speeds of the trains within this portion of the project.

Q3: Is Wayne Avenue designated as a “Quiet Zone” for purposes of noise levels?

Response:

No. A “Quiet Zone” is a Federal Railroad Administration designation used on freight or heavy rail. It is not relevant to light rail operations (which are much quieter).

Q4: The noise level calculations appear to be misleading in the Purple Line Noise Technical Report of October 2013.

- A) This report shows that the current noise levels at M-25 (Springdale Rd. and Wayne Ave.) and M-26 (Bonifant Ave. and Wayne Ave.) are measured as 71 and 68 dB(A) Ldn, respectively. At what distance from the roadway centerline were these measurements taken?

Response:

Table 5 in the Noise Technical Report indicates that the estimate for project related noise was based on a distance to the centerline of the tracks of 45 feet for receptor M-25 and 93 feet for receptor M-26.

- B) Page 15 shows that the maximum noise level will be 78 dB(A) at 50 feet, is that the maximum noise level at the time of a warning device or bell is sounded, or is that an average? Has this been given the same 10 dB penalty for night hours that current noise levels were given, when calculating the impact to the neighborhood? Why are these noise levels much lower than other light rail installations?

Response:

Page 15 indicates that the maximum noise level of 78 dB(A) at 50 feet is within 5 seconds of the train approaching a station or grade crossing. The dB(A) is a maximum noise level, but the warning device will only be sounding as the train enters and leaves a Purple Line station.

- C). On page 8, it says that impact analysis was done at a distance of 350 feet. Was that a distance consistent with the actual sound levels measured, and consistent with the 78 dB(A) at 50 feet?

Response:

The 350 feet distance was not used in any of the noise levels actually measured or projected as part of the Purple Line noise impact analysis. The 350 feet is simply what the Federal Transit Administration (FTA) recommends applying in a general sense when a screening procedure is used to determine if there is a likelihood of noise impact from a project. MTA carried out a detailed noise impact analysis for the Purple Line, not a simple screening procedure.

- D). On page 15, it says that at grade crossings with traffic or pedestrian control signals, no crossing bells or gates were assumed. There are multiple intersections that currently have traffic and pedestrians cross without control signals, for example at Dartmouth Avenue. Will crossing bells and gates be installed in these locations? Will traffic controls

be added? If not, what safety measures will be put in place and why is this standard not being followed?

Response:

Crossing bells or gates will not be installed at any of the signalized or non-signalized intersections along Wayne Avenue. These standards do not apply along Wayne Avenue due to the slower speed of the trains within this portion of the project.

- E). In Table 5, the project-related noise at the M-25 and M-26 locations on Wayne Avenue is shown to be 43 and 65 dB(A), respectively. Is this noise level an average? If so, over what period, and was a 10 dB penalty added for night noise? If not, what is the peak noise level? What distance from these points is this noise level predicted for? What are the primary factors for the significant difference in noise levels at these two sites?

Response:

Please note that the FTA impact criteria compare existing measured ambient outdoor noise levels (over a 24-hour period) with the noise estimated to be generated solely by the transit noise sources, as defined by the service operations established for the Purple Line. The project related noise levels at M-25 of 43 dB(A) and at M-26 at 65 dB(A) represent noise levels measured using a weighting system called “A weighted “ levels that are expressed in decibel notation dB(A). The “A weighted” decibel system takes into account to what frequencies the human ear is sensitive, measuring noise levels over a 24-hour period with a 10-decibel penalty added to noise levels that occur during nighttime hours to account for the fact that people tend to be more sensitive to sound during the typical sleeping hours (between 10 PM and 7 pm). As Table 5 indicates, receptor M-25 was measured at a distance of 45 feet to the track centerline, while M-26 was 93 feet from the track centerline. However, the difference in the noise level for these two receptors can be largely be explained by their existing (ambient) noise levels of 71 Ldn and 68 Ldn respectively.

Q5: What assurances is there that train speed of the Purple Line on Wayne Avenue never exceeds 10 MPH?

Response:

The maximum speed of trains travelling on Wayne Avenue is between 20 to 25 mph and trains will not exceed the posted speed limits. The 10 mph that is referenced is an average that takes into account station dwell times and signal delay times.

Q6: Who will assume liability if there are injuries or deaths on the Purple Line if they are found to be caused even partially by design or operation?

Response:

MTA cannot comment or speculate about future legal issues.

Q7: The planned speed of 10 mph of trains, combined with the current 35 + mph actual speed of traffic on Wayne is a very dangerous combination. In an open-house, a video was shown how

it would be dangerous for cars to make a left turn in front of an oncoming train due to the blind spot of the slower train and the faster car (as justification for adding dedicated turn lanes at some intersections).

- A) This same dangerous combination will be in place at any non-signalized left turn. What safety improvements will be put in place to address this?

Response:

What is being described for non-signalized intersections where cars need to turn left, is different than the situation at the Dale Drive/Wayne Avenue intersection. As noted above, 10 mph is an average speed between Manchester Place and the Silver Spring Library that takes into account station dwell times and signal delay times. When in mixed traffic, trains will operate at or near the posted speed limit. The justification for a left turn lane and associated left turn signal phase at Dale Drive was due to the eastbound train slowing to a stop at the station platform. This speed differential does not occur at any other location along Wayne Avenue.

- B) The cars at about 140 feet in length, will take 10 seconds to pass at full speed, longer when stopping or starting from a traffic signal at the station. Impatient drivers will try to “beat” the train to get in front of it to access a left turn lane at Dale, Sligo Creek of Fenton, particularly since the left turn lane will not be accessible until the next light cycle since the trains will be longer than the turn lanes. This will cause a very dangerous situation for the train, cars from both directions, and any pedestrian, in the intersection. How will this be prevented?

Response:

The westbound left turn lane approaching Fenton Street, the westbound left turn lane approaching Dale Drive, and the eastbound left turn lane approaching Sligo Creek Parkway are much longer than the length of the train. While the remaining left turn lanes are near to or shorter than the length of the train, we do not expect a significant difference in travel speeds. As noted above, Purple Line trains will operate at or near the posted speed limit.

- C) For both situations, how can traffic speed limits of 25 mph or lower be enforced?

Response:

Montgomery County Police have made it clear in several meetings that they will be enforcing speed limits along Wayne Avenue.

- D) Does the Purple Line Transit Partners recognize the risk and assume the liability for these risks?

Response:

PLTP fully understands risks associated with the Purple Line and will assume responsibility for operating the Purple Line along Wayne Avenue, and the entire 16-mile project.

Q8. The planned design does not appear to take into consideration the risks and recommendations for pedestrian safety described in Chapter and other sections of the

Guidebook on Pedestrian Crossings of Public Transit Rail Services, created by TRB, and sponsored by the FTA. This report states that pedestrians are not predictable, and that accidents are much more likely to be fatal than other types of transportation. Is non-compliance with these recommendations acknowledged, and is it permissible to do so while receiving federal funding?

Response:

The Purple Line is in full compliance with the FTA requirements for safety and security. Based on the MTA's requirements, a Pedestrian Hazards Analysis was conducted in several workshops held in 2014 in which pedestrian crossings of the Purple Line tracks were studied. The 30% Preliminary Design was evaluated for hazards to pedestrians using MTA's hazard methodology outlined in the Purple Line System Safety Program (SSPP). Pedestrian crossing treatments were determined using the Pedestrian Controls Decision Tree included in "TCRP Report No. 69 Light Rail Service: Pedestrian and Vehicular Safety". Many of the recommendations from the hazard analysis were incorporated in the Purple Line Technical Provisions. Pedestrian controls were recommended using the decision tree factoring in the operational environment of the crossing.

Q9. The Guidebook on Pedestrian Crossings of Public Transit Rail Services recommends a safety audit be completed at the preliminary and detail design phases of the project as well as being done after implementation. Has this been done for completed stages, is it planned for future stages, and was it done by an independent group? If it has been completed, can the reports be supplied? If not, who acknowledges and accepts responsibility?

Response:

Please note that "TCRP Report No. 175 Guidebook on Pedestrian Crossings of Public Transit Rail Services" states that several methods are used to identify and evaluate pedestrian safety issues, including risk-based analysis. MTA has chosen a proactive, risk-based hazard analysis on the detailed 30% Preliminary Design. PLTP is currently conducting their risk-based hazard analyses on the detailed design development, including pedestrian crossings. A risk-based approach includes an evaluation based on severity and probability of the hazard, as well as the conditions of the operational environment. PHAs are completed per the FTA requirements and considered part of the ongoing design work for the Purple Line. They are not distributed to the general public. The PHAs are conducted by the design team and safety professionals, not an independent group.

The question of liability cannot be answered at this time, due to pending litigation.

Q10. Figure 16 on page 40 of the same Guidebook shows a decision tree for required controls for safety at areas including school zones, among other relevant areas. These measures do not appear to be in place for the Elementary and Middle School zones. How will these safety requirements be incorporated?

Response:

The Pedestrian Controls Decision Tree, Figure 16 in "TCRP Report No. 175 Guidebook on Pedestrian Crossings of Public Transit Rail Services", is the same Decision Tree provided in "TCRP Report No. 69 Light Rail Service: Pedestrian and Vehicular Safety 2001". The Pedestrian Controls Decision Tree was used for the Purple Line in proposing pedestrian crossing treatments along the project for the 30% Preliminary Design. PLTP is also using this same

methodology to determine the crossing treatments in their detailed design. PLTP's designs have progressed beyond the Preliminary Design, but are still under development at this time. Safety requirements are incorporated based on the results of the risk-based approach hazards analysis.