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National Capital Purple Line Light Rail Transit Project
Montgomery and Prince George's Counties, MD
Maryland Transit Administration (MTA)
Baltimore, Maryland
FINAL

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EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) performed a review of Maryland Transit Administration's (MTA's) National Capital Purple Line Light Rail Transit Project with the MTA project team on *July 9, 2020*, via a virtual web-based video meeting due to COVID-19 travel and social distancing restrictions. Updated project information as of that date is reflected in this report.

A. Project Description

The National Capital Purple Line ("Purple Line") is a 16.2-mile east-west Light Rail Transit (LRT) line extending inside the Washington, DC Beltway from Bethesda in Montgomery County, Maryland, to New Carrollton in Prince George's County, Maryland. The Purple Line will operate largely at street level in a combination of dedicated and semi-exclusive right-of-way (ROW), and also includes segments on elevated structures and in tunnels. The alignment for the Purple Line will provide direct connections to Washington Metropolitan Area Transit Authority (WMATA) service at Bethesda, Silver Spring, College Park, and New Carrollton, Maryland. The project will also connect to all three Maryland Area Regional Commuter rail lines, Amtrak, and local bus routes. The project includes 21 stations, 2 operations control/vehicle storage and maintenance facilities, and 25 light rail vehicles (LRVs). MTA is executing the project using a Public-Private Partnership (P3) method of project delivery. As documented in the Full Funding Grant Agreement (FFGA), the estimated project cost is \$2,407,030,288, and the scheduled Revenue Service Date (RSD) is December 31, 2022.

B. Project Status

Following the execution of the FFGA on August 22, 2017, the Purple Line project is currently in the construction phase, and Purple Line Transit Partners (PLTP) is the P3 concessionaire.

Scope/Significant Activities

- Regarding the third lawsuit filed by The Friends of the Capital Crescent Trail in January 2019 against U.S. Army Corps of Engineers (USACE), the District Court ruled in favor of the USACE/MTA motion for Summary Judgement to Dismiss, and the case was dismissed in April 2020. The plaintiff subsequently filed an appeal on May 11, 2020, and the case continues in the legal process.
- Purple Line Transit Constructors (PLTC), the PLTP partner responsible for the design and construction of the capital project, continues with project design. MTA's assessment of PLTC's design progress estimates that substantial design for Civil packages will be completed in August 2020 and for Systems packages (except for fare collection) will be completed in September 2020. The original baseline schedule anticipated design completion by late fall 2017. The current progress through mid-*July 2020* reflects that 180 of the 215 total planned design packages, as being tracked by MTA, have been issued as Released For Construction (RFC). The 215 total packages include Systems as well as Civil and Utilities packages.

- In late April 2020, PLTC notified PLTP that, due to its forecasted schedule delays on the project, it intends to exercise the clause that allows it to terminate its contract with PLTP. This issue has not yet been resolved. See the **Major Problems and/or Issues** subsection of this **Executive Summary** for further details.
- MTA, PLTC, and CSX Corporation (CSX) (a rail-based freight transportation company) reached conceptual agreement on the remaining CSX-related design issues as summarized below. As of mid-July 2020, only the following implementing actions remain to be resolved:
 - Design of the mezzanine connector pedestrian bridge (non-FFGA) as “building concourse” space, so that CSX will accept a 23-foot vertical clearance above the CSX tracks. In its review of the final design submittal, CSX made additional comments, and as a follow-up, PLTC prepared additional code compliance documentation. In May 2020, CSX indicated that the design is acceptable. *In June 2020, revised documentation was transmitted to CSX, and MTA is awaiting the written concurrence from CSX.*
 - New drainage connections (non-FFGA) were relocated from the CSX yard area to Montgomery County-owned property, pending Montgomery County formally accepting responsibility for one additional connection that is currently under the responsibility of CSX. The formal agreement between Montgomery County and CSX for the transfer of connection responsibility is in negotiation, and the agreement for the property was signed; the acquisition is therefore in its final stages. *On June 16, 2020, Montgomery County returned edits to the acquisition agreements, and these agreements are now awaiting CSX’s response or acceptance. Final design approval will be withheld until the contractual language in the acquisition documents has been accepted. It may be necessary to separate packages in order to expedite approval for the Montgomery County area separately from other CSX approvals.* PLTP/MTA negotiations are continuing regarding the cost responsibility for jacking and boring activities for reaching a second connection point.
- MTA and Washington Suburban Sanitary Commission (WSSC) reached agreement on an alignment, primarily in the median of Veterans Highway, where the 66-inch water main that currently runs under the Glenridge light rail Operation and Maintenance Facility (OMF) will be relocated. The original Purple Line General Engineering Consultant (GEC) team is performing the design, WSSC will provide the material, and MTA will separately contract for the construction that is anticipated in the first quarter of Calendar Year (CY)2021. Design is underway, and the 30% design package was submitted to WSSC for review. This work is separately funded from the FFGA, but MTA is currently coordinating the construction approach and sequencing with PLTC to avoid conflicts between the two projects as they proceed in proximity to each other near the Glenridge

OMF. This relocation is not schedule-critical work. *Design and approvals are proceeding on schedule.*

- PLTC reached resolution on the last remaining Alternate Technical Concept (ATC) identified during the proposal process, which is related to the use of jet fans at the Bethesda Station in lieu of vent shafts. In accordance with the established process, MTA is currently reviewing PLTC's design package for National Environmental Policy Act (NEPA) compliance. MTA reports that documentation will be provided to the Federal Transit Administration (FTA) in August 2020.
- MTA continues implementing its non-P3 construction contract activities, as follows:
 - Prince George's County Parks (Parks) Polk Street Maintenance Facility Design-Build (D-B) contract – The D-B contractor, Forrester, completed design and construction is in process. The North Building construction activities include installation of *Mechanical, Electrical, and Plumbing (MEP) devices and fixtures, power conductors, and interior wall taping and paint.* South Building construction activities include installation of *conduits, conductors, and devices.* Exterior activities include *preparing for landscape and paving.* *The anticipated turnover to Parks is September 2020.*
 - Off-site Wetlands Mitigation (Ken-Gar) – The Design-Bid-Build construction contract was awarded and Notice to Proceed (NTP) was issued on September 5, 2019. Kickoff meetings were conducted, and the contractor applied herbicides for invasive species before the end of the fall 2019 season. The contractor mobilized in December 2019. *Current activities include rework of incorrect elevations at the east wetland, rough grading for the athletic field, and removal of invasive plant species from the east wetland enhancement cell.*
 - Off-site Stream Mitigation (Paint Branch) – The Design-Bid-Build construction contract was awarded and NTP was issued on September 5, 2019. The contractor mobilized in late November 2019. Installation of erosion and sedimentation (E&S) controls was completed and approved by Maryland Department of the Environment (MDE) in early February 2020. *Current activities include the Park side mulch access road, in-stream diversions, and cross veins in the stream channel.*
- PLTC's construction activities continue throughout the corridor. Utility relocations, drainage work, and retaining and noise wall construction continue in various locations. Abutment construction for the Connecticut Avenue and Rock Creek aerial structures and the Jones Mill underpass continues, *and construction of the Jones Mill arches are scheduled for the week of July 13, 2020.* Construction activities continue on the Talbot Avenue and 16th Street vehicular bridges. Site preparation, utility relocation, and wall construction for the Lyttonsville OMF continue. Deck pans and shear studs were installed on two spans of the Silver Spring Transit Center aerial structure, while construction of the remaining piers and abutment continues. At Manchester Place

Station, construction of walls for the Plymouth Street access to the station continues. At the Plymouth Tunnel East cut-and-cover section, backfilling on the completed roof continues. *Portal wall excavation and lagging installation have also started.* In the tunnel, placement of ductbank conduits, reinforcing steel, and concrete for the maintenance/emergency walkway through the tunnel *was completed.* Design is available for construction to start on the Bethesda Enclosed Trainway (BET) existing grade beams, *and grade beam installation is planned to begin on July 27, 2020.* Progress on utility relocations on the University of Maryland (UMD) campus has benefitted from the absence of students due to COVID-19 restrictions. Work on the abutment *and the pier* for the Northwest Branch Anacostia River Bridge continues. Utility relocation and excavation for installation of embedded track on Campus Drive at the CSX/Wmata underpass continue. Deck placement on the Northeast Branch Anacostia River LRT Bridge was completed except for the plinths, which will likely be installed later to allow the bridge to be used for construction vehicle access. At the Baltimore-Washington Parkway Bridges, northbound traffic was switched back onto the permanent structure. Wall construction along Veterans Parkway continues. At the Glenridge OMF, *pre-final inspections of Level 3 began. Wiring; plumbing; Heating, Ventilation, and Air Conditioning (HVAC); and lighting work continues.* Site preparation continues for Traction Power Substations (TPSSs) #7 and #8, *and at the Glenridge OMF. Manufacturing and testing of switchgear and rectifiers continue.* To date, 94 of approximately 1,200 planned Overhead Contact System (OCS) pole foundations and approximately 1 mile of communications infrastructure backbone ductbank has been installed.

- Vehicle carshell manufacturing activities by Construcciones y Auxiliar de Ferrocarriles (CAF), which were coordinated with design progress, continued until the facility in Spain was shut down in late March 2020 and the final assembly facility in Elmira, New York, was shut down in early April 2020 due to restrictions related to the COVID-19 pandemic. CAF's facility in Spain gradually reopened starting the week of April 20, 2020, and is now fully staffed for this project. The facility in Elmira, New York, reopened on May 18, 2020, at 50% of its workforce. The following is the current status of LRV manufacturing as of mid-June 2020:
 - In Spain, resolution of MTA comments on Intermediate Design packages has been completed, and resolution of comments on the Final Design packages continues. The manufacturing of carshells has resumed. To date, 83 carshell segments have been completed in Spain, including 53 carshells that have been shipped to the United States for final assembly and 11 carshell segments that are being prepared for shipment.
 - Final assembly of vehicles is being performed in CAF's facility in Elmira. There are currently 42 carshells (8 full vehicles and 2 of the 5 carshells for the ninth vehicle) in Elmira. CAF assembled all five carshell segments of the first two vehicles and placed the vehicles on their trucks at the Elmira test track for static

testing. CAF completed modifying the power supply to its Elmira test track from 750 volts to 1500 volts, and LRV 101 was operated on the Elmira test track under its own power in December 2019. Static testing of the first two vehicles, LRVs 101 and 102, continues, *and limited dynamic testing has now begun*. Final assembly of all five segments of the third through eighth vehicles and the first two segments of the ninth vehicle continues in various stages in Elmira. Environmental chamber testing of LRV 101 *began on June 22, 2020*.

- Shipment of the first vehicle to the project site is dependent on the readiness of onsite storage space, the test track, and the availability of traction power, which is currently anticipated to be available in October 2020. CAF and PLTP *submitted* the Factory Test (in Elmira) Procedures and the Field Test (onsite) Procedures; *these procedures are under* MTA review.
- MTA has continued to submit environmental re-evaluations as required based on design advancement and other causes. To date, PLTC and MTA have prepared multiple packages, primarily for minor Limits of Disturbance (LOD) cases, have submitted these packages to FTA for review, and have received FTA concurrence. MTA is currently preparing a request for submittal to FTA consisting of one minor LOD change for a utility tie-in on the UMD campus and *expects to submit it to FTA soon*. There are currently no packages under review by FTA.
- MTA is responsible for providing offsite stormwater mitigation in Montgomery County. To date, MTA has accumulated a credit for more than 10 acres of designed, MDE-approved offsite stormwater management (SWM) capacity in its “bank.” MDE indicated that construction can proceed provided there is a positive balance of credits to construction impact. As of mid-June 2020, MTA assessed that onsite mitigation will be close to satisfying the construction mitigation requirements, but it could sway to the positive or negative as PLTC’s onsite mitigation continues to be reviewed and approved by MDE. The project continues to hold off on advertising any construction of offsite mitigation sites until and unless it determines that the onsite mitigation is not sufficient. *The PMOC continues to monitor the status of this issue*.
- ROW acquisition activities continue for the required 464 private parcels and 137 public parcels—a total of 601 parcels. All of the private parcels related to the original P3 contract Exhibit 9 FFGA scope are in MTA possession. To date, 339 of the 464 private properties have completed settlement.
- MTA also evaluated and reduced the approximately 280 additional small acquisitions initially identified by the P3 concessionaire for utility relocations to a current total of 175 parcels (including two parcels that PLTC is expected to request), of which 125 are private and 50 are public. To date, 169 of the additional 173 properties are in MTA possession through Rights of Entry (ROE), options, and/or agreements. The remaining private parcels are not for utility relocations and are not as immediately needed. The cost responsibility for these additional parcels has not yet been negotiated.

- To date, all of the identified 176 required relocations have been completed; however, costs for the moves completed continue to be filed in accordance with the applicable procedures. Also, MTA is monitoring terms of agreement of the above property acquisitions that have not yet completed settlement, because some of them have the potential to result in the need for additional relocations.
- Preparation for Safety Certification is ongoing, including the development of the appropriate checklists for both design and construction.
- Relative to management capacity and capability, in early March 2020, both the Executive Director of MTA Transit Development and Delivery (TDD) and the Purple Line Project Director announced that they were (separately) leaving the organization to accept positions elsewhere. *On June 17, 2020, MTA brought on Mathew Pollack to serve as the TDD Executive Director. Vernon Hartsock transitioned to the role of Acting Purple Line Project Director, supported by a team of consultants. MTA is currently recruiting for the recently created Deputy Project Director position. Other open positions include Director of Safety, Media Relations Manager, Systems Safety Manager, and several special projects positions.*

Cost

- The project's documented expenditures are *\$1,396.4 million through May 31, 2020.*
- There is significant risk that mitigation to recover the schedule and associated change order negotiations will result in substantial added costs to the project. See the **Major Problems and/or Issues** section below.
- Refer to Table 2, FFGA Core Accountability Items, below for additional project cost information.

Schedule

- PLTC currently does not have an approved recovery schedule to address the one-year delay to the start of construction caused by the environmental lawsuit. In response to a letter that FTA issued to MTA in early August 2018 expressing concerns about the amount of time that the project had advanced without an approved schedule, MTA prepared a working schedule update of the master project schedule and submitted "MTA Master Schedule August 2018." The updated proposed baseline schedule was based on the negotiations as of August 2018 of the P3 contract schedule. These negotiations have been ongoing with PLTC since late 2017 and have been detailed in prior PMOC Monthly Monitoring Reports; but the updated proposed baseline schedule is not based on a mutually agreeable P3 contract schedule. In fall 2019, the P3 concessionaire submitted a revised fully cost-loaded schedule in response to the terms of the negotiations, reflecting a phased project opening (with the first phase opening at the end of 2022 and the second phase opening in mid-2023). This phased opening schedule is currently the basis of the ongoing MTA/PLTP negotiations, but MTA has not yet incorporated it into the working

master project schedule. See also the **Major Problems and/or Issues** subsection of this report, below.

- Table 1 presents the current key milestone dates for the project, showing the last approved (March 15, 2017) master project schedule, the MTA Master Schedule August 2018 proposed re-baseline, and the (most recent) February 2020 progress update of the MTA Master Schedule proposed re-baseline. (MTA reports that the progress updates of the master project schedule, with data dates of March 31, 2020, and April 30, 2020, are continuing to undergo internal review by MTA.) For brevity in this executive summary, previously actualized milestones are not shown here but are presented in the body of this report.

Table 1 – National Capital Purple Line LRT Key Milestone Dates

Activity	Latest (March 15, 2017) Approved Project Schedule	MTA Master Schedule August 2018 (working baseline)	MTA Master Schedule, February 29, 2020 Update
All Significant ROW Acquisition and Relocation	As needed by construction	---	All P3 contract Exhibit 9 properties in possession
Commencement of Trial Running	---	03/09/2022	06/08/2022
P3 Ready to Commence Revenue Service	TBD	10/28/2022*	12/26/2022
MTA Opens for Revenue Service	3/2022	---	12/26/2022
Revenue Operations Date (includes contingency)	12/31/2022	---	12/31/2022
FFGA RSD (includes contingency)	12/31/2022	12/31/2022	12/31/2022

* P3 RSD is based on MTA's working version of an updated integrated master project schedule based on earlier MTA/P3 concessionaire negotiations, but this working version of the schedule will likely be superseded by the P3 fully resource-loaded phased schedule, once negotiations have concluded and schedule agreement is reached. (See **Major Problems and/or Issues**, below.)

C. Core Accountability

Table 2 – FFGA Core Accountability Items

Project Status:		Original at FFGA	Current Estimate (Estimate at Completion [EAC])
Cost	Cost Estimate	\$2,407,030,289	\$2,407,030,289
Contingency	Unallocated Contingency	\$90,535,748	\$10,792,334
	Total Contingency (allocated plus unallocated)	\$150,035,748	\$31,374,432
Schedule	RSD (FFGA)	December 31, 2022	December 31, 2022
	MTA Target RSD	March 31, 2022	December 26, 2022 (Note 5)
		Amount (\$)	Percent (of total)
P3 Planned Value to Date	Total budgeted cost of work scheduled to date (if available) (Note 1)	Not Available	---
P3 Earned Value to Date	Budgeted cost of work completed to date, i.e., actual total value of work earned or completed (if available) (Note 1)	Not Available	---

P3 Actual Cost	Total cost of P3 work completed to date (actual total expenditures)	\$876,982,776	48.1%
Total Project Actual Cost	Total cost of work completed to date (actual total expenditures)	\$1,357,900,099	56.4%
		Amount (\$)	Percent
Contracts	Total contracts awarded to date (Note 2)	\$2,336,207,719	97.1%
	Total construction contract awarded to date (construction contracts only) (Note 3)	\$1,089,406,198	98.7%
	Physical construction work completed (amount of construction contract work actually completed) (Note 4)	\$412,366,478	37.9%
Major Issues	Status	Comments / Action / Planned Action	
See discussion (Major Problems and/or Issues) below.	See discussion (Major Problems and/or Issues) below.		
Date of Next Quarterly Meeting (if known):		August 13, 2020	

NOTE 1: The Planned Value to Date and the Earned Value to Date are currently not available, because even approximated values are unreliable and/or misleading until re-baselining of the P3 cost-loaded schedule is completed. This effort is ongoing with the P3 contractor.

NOTE 2: Amount includes value of all construction, ROW, vehicle, and professional services contracts awarded to date (ROW "awarded" value is the cost of ROW to date). Percentage is calculated based on a total project cost estimate of \$2,407,030,288.

NOTE 3: Amount includes the values of Standard Cost Categories (SCCs) 10 through 50 of all contracts awarded to date. Percentage is calculated based on the project's total planned SCCs 10 through 50 costs, including approved changes contained in the project's latest SCC Workbook.

NOTE 4: Amount includes the SCCs 10 through 50 values expended to date. Percentage is calculated based on the project's total planned SCCs 10 through 50 costs, including approved changes contained in the project's latest SCC Workbook.

NOTE 5: The current EAC for the schedule (MTA Target RSD) of December 26, 2022, is from MTA's working version of an updated integrated master project schedule progressed through February 29, 2020, which is based on MTA/P3 concessionaire negotiations to date, but for which final agreement with the P3 concessionaire has not been reached. This working version of the schedule will likely be superseded by the most recent fully resource-loaded phased schedule, which is currently still under negotiation with PLTP, once it is approved by MTA.

D. Major Problems and/or Issues

- Due to the impacts of the initial lawsuit filed by the Friends of the Capital Crescent Trail, it has been challenging for MTA to strictly follow the procedures and practices established in the Purple Line Project Management Plan (PMP) and its sub-plans.
- According to the PMP, the master schedule should be updated monthly; however, the most recently approved master project schedule update is as of March 15, 2017. Since the December 2016 baseline schedule no longer reflects project conditions, the project does not currently have an approved resource-loaded master integrated project schedule to serve as a management tool.
- In May 2018, MTA issued a directive letter for PLTP to incorporate the workshop mitigations, but agreement on a mitigated project schedule was still not imminent at that time. In summer 2018, the Maryland Secretary of Transportation strongly encouraged PLTP to negotiate in good faith, and in August 2018, FTA sent a letter to MTA expressing its concerns about the amount of time that the project had advanced without

an approved schedule. FTA requested MTA's formal response to that letter by September 30, 2018. In response, MTA prepared a working schedule update (proposed re-baseline) of the master project schedule. The update is based on the schedule negotiations as of August 2018, but it does not have the full mutual agreement of both parties. MTA performs monthly progress updates of the MTA master project schedule based on the progress updates received from PLTP as well as from its internal staff, relative to the proposed August 2018 schedule re-baseline.

- Although the most recently issued schedule update (February 29, 2020) of the MTA master project schedule continues to show the start of revenue service occurring before the FFGA RSD of December 31, 2022, the current MTA-forecasted PLTP Commencement of RSD milestone is December 26, 2022, which provides essentially no schedule contingency for the nearly three remaining years of construction, testing, and commissioning.
- The intensity of the schedule negotiations heightened in fall 2019, and the P3 concessionaire submitted a revised fully cost-loaded schedule in response to the terms of the negotiations. This P3 schedule, which MTA has accepted for the purpose of the negotiations, reflects a phased project opening, with the first phase opening at the end of 2022 and the second phase opening in mid-2023. MTA has not yet incorporated this P3 schedule into its working master project schedule.
- In late April 2020, PLTC notified PLTP that, based on its forecasting of schedule delays on the project (which were not mutually agreed upon), PLTC intends to exercise the clause in its P3 contract with PLTP that allows it to terminate the contract for design and construction services under the P3 contract if delays exceed 365 days. MTA sent a formal request to PLTP for a response that included a definitive path forward for PLTP's intended management of the P3 contract. On May 14, 2020 (the date the response to the formal request was due), PLTP submitted its response, which states that PLTP intends to continue to negotiate with PLTC to retain PLTC as part of the P3 concessionaire team. *On June 23, 2020, PLTP sent a formal Notice of Unconditional Election to Terminate the P3 Agreement. However, PLTP indicated a willingness to negotiate a settlement. On June 24, 2020, MTA sent a Formal Notice of Concessionaire Default. This notice essentially refuted the validity of the PLTP delay claims and stated that if PLTP fails to perform, MTA has a number of options related to the agreement. Through early July 2020, construction activities continue at the level previously planned, and construction progress has not been apparently affected to date by this contract-related development.*
- There is significant risk that the project schedule, as reflected in the FFGA, will be affected, and it is anticipated that an MTA Purple Line Project Recovery Plan, including a revised contractually enforceable project schedule with adequate schedule contingency to address remaining project risks, will be required. MTA continues to prepare a draft Recovery Plan in accordance with the requirements of the FFGA, and the final cost,

schedule, and risk details will be incorporated into the draft Recovery Plan after the completion of negotiations with the P3 concessionaire.

- Concurrent with schedule negotiations, MTA also continues to negotiate the Change Orders submitted by the P3 concessionaire that claim cost impacts from the delayed execution of the FFGA. Final resolution of the cost and schedule impacts will depend on the resolution of the schedule, as noted above. There is significant risk that the project cost, as reflected in the FFGA, will be affected, and it is anticipated that an MTA Purple Line Project Recovery Plan, including a revised project cost estimate with adequate cost contingency to address remaining project risks, will be required. MTA is addressing revised project costs in the development of the draft Recovery Plan discussed above. MTA will incorporate the final cost, schedule, and risk details after the completion of negotiations with the P3 concessionaire.
- PLTC's forecasted substantial completion of its design scope is now August 2020 for Civil packages and September 2020 for most Systems packages, which is significantly behind the scheduled date of fall 2017 in the P3 contract. As a result, the construction progress is also behind the anticipated schedule in the P3 contract.
- *COVID-19 has caused impacts to construction activities. During the period from March to May 2020, some construction crews did not report for work, but MTA reports that PLTP effectively shifted activities to reduce this impact. Since mid-June, the continuing COVID-19 pandemic appears to have had little impact. Some onsite employees tested positive for COVID-19, but the contractors appear to have addressed this development. In addition, the pandemic has caused occasional delivery delays, but has had little overall supply chain impact. Some acceleration of specific construction activities occurred due to a pandemic-related reduction in pedestrian and vehicle traffic and the resulting increased contractor access to the job site. In the opinion of the PMOC, MTA should itemize, track and document COVID related costs and schedule delays.*

TABLE OF CONTENTS

EXECUTIVE SUMMARY i

A. Project Description..... i

B. Project Status i

C. Core Accountability vii

D. Major Problems and/or Issues..... viii

MONTHLY MEETING REPORT 1

A. Project Status 1

B. Project Management Plan and Subplans..... 13

C. Project Management Capacity and Capability..... 16

D. Project Cost..... 17

E. Project Schedule..... 19

F. Quality Assurance / Quality Control (QA/QC) 22

G. Safety and Security 23

H. Americans with Disabilities Act 25

I. Buy America 25

J. Vehicles and Vehicle Technology 26

PROJECT RISK 27

ACTION ITEMS 28

APPENDIX 1 – SAFETY AND SECURITY CHECKLIST 29

APPENDIX 2 – TOP PROJECT RISKS 33

APPENDIX 3 - ROADMAP TO REVENUE OPERATIONS..... 35

APPENDIX 4 – PROJECT MAP 36

APPENDIX 5 – LIST OF ACRONYMS..... 37

APPENDIX 6 – COST VS. BUDGET 40

APPENDIX 7 – FTA SCC WORKBOOK – BUILD MAIN, JUNE 1, 2016 UPDATE..... 41

APPENDIX 8 – PROJECT SCHEDULE 42

APPENDIX 9 – VEHICLE STATUS REPORT 45

APPENDIX 10 – CONSTRUCTION PHOTOGRAPHS..... 46

LIST OF TABLES

TABLE 1 – NATIONAL CAPITAL PURPLE LINE LRT KEY MILESTONE DATES..... VII
TABLE 2 – FFGA CORE ACCOUNTABILITY ITEMS VII
TABLE 3 – SOURCES OF FEDERAL FUNDING AND MATCHING SHARE RATIOS..... 19
TABLE 4 – NATIONAL CAPITAL PURPLE LINE LRT KEY MILESTONE DATES..... 21
TABLE 5 – NATIONAL CAPITAL PURPLE LINE PROJECT
CRITICAL 90 DAY LOOK AHEAD..... 22

MONTHLY MEETING REPORT

INTRODUCTION

The Project Management Oversight Contractor (PMOC) performed a review of Maryland Transit Administration's (MTA's) National Capital Purple Line Light Rail Transit Project with the MTA project team on *July 9, 2020*, via a virtual web-based video meeting due to COVID-19 travel and social distancing restrictions. Updated project information as of that date is reflected in this report.

A. Project Status

After the U.S. Court of Appeals reversed the vacation of the Record of Decision (ROD) in July 2017 (refer to the Environmental subsection of this Project Status section for details), the Full Funding Grant Agreement (FFGA) was executed on August 22, 2017, approximately one year later than planned. The project is currently in the construction phase. Purple Line Transit Partners (PLTP) is the Public-Private Partnership (P3) concessionaire.

MTA Design

MTA's General Engineering Consultant (GEC) completed the project design to approximately 30% design level in fall 2013 and provided incremental enhancements through late 2015. This design formed the basis of the Request for Proposals (RFP) for the P3 contract. See the P3 Design subsection below for a discussion of the advancement of this design by Purple Line Transit Constructors (PLTC), the PLTP partner responsible for the design and construction of the capital project.

MTA continued to advance the design to 100% for the following scopes, to support construction contracts under a Design-Bid-Build delivery method separate from the P3 scope:

- Stream mitigation – MTA completed the 100% design packages in June 2017 and received approval from Maryland Department of the Environment (MDE) in May 2018. Several design adjustments were subsequently made based on further MDE comments up until the time that the construction contract was advertised on March 8, 2019. See the Environmental Mitigation subsection of this report for additional details.
- Wetlands mitigation – MTA completed the 100% design packages in June 2017 and subsequently addressed several late-arriving comments from MDE. Several design adjustments were subsequently made based on further Montgomery County comments up until the time that the construction contract was advertised on May 3, 2019. See the Environmental Mitigation subsection of this report for additional details.
- Montgomery County offsite stormwater management (SWM) sites – MTA completed design and obtained MDE approval of more than the P3 contract-required 5 acres of offsite mitigation on May 29, 2018, ahead of the June 30, 2018 contract deadline. In late October 2019, MTA received MDE approvals for the next 5 acres to be added to the “bank,” thus satisfying the contract requirements for 2019. MTA's subsequent discussions with MDE indicated that construction can proceed, provided there is a

positive balance of credits to construction impact. Because there is a positive offsite mitigation balance, MTA continues to evaluate whether it will need to seek any further additions to the current credit “bank” for 2020. MTA may not need to construct any sites, depending on Purple Line Transit Constructor’s (PLTC’s) ability to provide onsite mitigation. See the Environmental Mitigation section of this report for the current requirements.

MTA also completed the design to support a Design-Build (D-B) contract for the replacement of the existing Prince George’s County Parks (Parks) Maintenance Facility with a facility on Polk Street. See the Real Estate Activities and the Construction (MTA Scope) subsections of this report for further details.

P3 Design

PLTC is the partner responsible for the design and construction of the capital project.

PLTC has reached resolution on the last remaining Alternate Technical Concept (ATC) identified during the proposal process. The last ATC was approved by MTA subject to required approvals by the authorities having jurisdiction, and it is related to the use of jet fans at the Bethesda Station in lieu of vent shafts. The final determination of compliance with National Fire Protection Association Standard 130, which establishes acceptability of the ATC, is with the State Fire Marshall, who reviewed and signed off on the Bethesda Enclosed Trainway design that incorporates this change in February 2020. *In accordance with the established process, MTA is currently reviewing PLTC’s design package for National Environmental Policy Act (NEPA) compliance. Once reviewed, documentation will be provided to the Federal Transit Administration (FTA). The PMOC continues to monitor progress.*

MTA and Carr Properties (Carr) in Bethesda, Maryland, came to an agreement on Carr’s providing an underground box structure in which the Purple Line project activities can continue while Carr’s redevelopment proceeds above. MTA and Carr executed the Memorandum of Agreement in March 2018. The underground box structure was turned over to PLTC on May 31, 2019, before PLTC was ready to access it for construction. The construction box is now being used by both PLTC and Carr to provide construction access needed for their respective projects.

CSX Corporation (CSX) informed the project team that its updated rail design criteria, which were issued after the “setting date” of the P3 contract, are now applicable to the Purple Line design. MTA and CSX worked to resolve issues related the applicable design criteria and which project areas are affected until a mutually agreeable path forward was defined for all areas, by July 2019. The following is the current status of the issues and their resolutions:

- To address CSX comments that would have disallowed passenger amenities (fare gates and ticketing kiosks) on the Silver Spring Transit Center (SSTC) Purple Line mezzanine connector pedestrian bridge above CSX tracks, and that would have required a 25-foot vertical clearance, MTA, PLTC, and CSX reached consensus on a design to interpret this area as a “building concourse.” In its review of the final design submittal, CSX made additional comments, and MTA and PLTC met with CSX in mid-December 2019 to

resolve these comments. As a follow-up, PLTC prepared additional building type and code compliance documentation and submitted these to CSX for review in early March 2020. In May 2020, CSX indicated that the design is acceptable. *In June 2020, PLTC transmitted revised design sheets to CSX, and MTA is awaiting the written concurrence from CSX.*

- CSX provided review comments disallowing revised drainage networks, related to the Capital Crescent Trail work, which would connect to CSX's existing drainage culverts. The work on the Capital Crescent Trail is not part of the FFGA and is separately funded by Montgomery County. As a result of working with Montgomery County, the connections have been relocated from CSX property to Montgomery County property and therefore are no longer a CSX issue. To fully accomplish this approach, two connections require resolution. Montgomery County needs to acquire two parcels of land from CSX (not FFGA-funded) and then accept responsibility for one connection currently under the responsibility of CSX. The formal agreement between Montgomery County and CSX for the transfer of connection responsibility is in negotiation, and the agreement for the property was signed while the acquisition was in its final stages. *On June 16, 2020, Montgomery County submitted edits to the acquisition agreements and is now awaiting CSX's response or acceptance. Final design approval will be withheld until the contractual language in the acquisition documents has been accepted. It may be necessary to separate the design packages to expedite approval for the Montgomery County area, so they can be treated separately from other CSX approvals.* A second location requires jack and bore operations, which are currently in process, to reach the connection point. The cost of the connection at this second location will be settled along with MTA and PLTP negotiations for a settlement on the impact of the vacated ROD and delayed FFGA. These changes affect the Capital Crescent Trail and are non-FFGA changes.

MTA's assessment of PLTC design progress forecasts substantial design completion for Civil packages in August 2020, substantial design completion for Systems packages (except for fare collection) in September 2020, and completion of the fare collection design package in 2021. The anticipated design completion in the original baseline schedule is by late fall 2017. *In July 2020, the number of planned Civil, Systems, and utility design packages was 215. The current progress through mid-June 2020 reflects that 180 of the 215 total planned design packages, as tracked by MTA, have been issued as Released for Construction (RFC).*

MTA project team members continue making significant efforts to facilitate PLTC design progress, such as dividing packages, conducting in-person comment resolution workshops, and assisting with MDE approvals where required. The PMOC noted that these additional efforts by MTA and its GEC and Project Management Consultant (PMC) to assist PLTC may manifest as additional Standard Cost Category (SCC) 80 project costs.

Construction

MTA Scope

Although the P3 concessionaire is responsible for the majority of the project construction, MTA also has construction responsibility in the areas of the new Parks Replacement Maintenance Facility (which is part of the real estate effort and budget), wetlands mitigation, stream mitigation, and possibly some offsite SWM sites. MTA has accomplished forest mitigation without the need for additional construction. The following is the current status of the MTA construction contracts.

Prince George’s County Parks Replacement Maintenance Facility This D-B contract was awarded after the March 20, 2019 approval by the Board of Public Works (BPW) of the construction contract award. Notice to Proceed (NTP) for the base scope was issued to the D-B contractor, Forrester Construction Company (Forrester), on April 5, 2019, and NTP for the “Add” and “Alternative” options was issued after award of those scopes in May 2019.

MTA approved Forrester’s final design package, Revision 2, with minor comments, on March 26, 2020, and MDE approved the final design package with minor comments on April 1, 2020. Forrester completed mobilization for construction in January 2020 and commenced with interior demolition.

Construction activities for the North Building portion of the maintenance facility include installation of Mechanical, Electrical, and Plumbing (MEP) devices and fixtures, power conductors, and interior wall taping and painting. Construction activities for the South Building include installation of conduits, conductors, and devices. Exterior activities include preparing for landscape and paving. The anticipated turnover of the completed maintenance facility to Parks is September 2020. Change orders are being processed for two additional scopes to be separately funded by Maryland National Capital Parks and Planning Commission, including providing internet service to the facility and replacing rather than refurbishing an existing 10,000-gallon fuel storage tank.

Offsite Wetlands Mitigation (Ken-Gar) – The Wetlands Mitigation_construction contract was awarded after the award was approved by BPW on September 4, 2019, and NTP was issued to Environmental Quality Resources, LLC on September 5, 2019. Kickoff meetings were conducted during the week of September 9, 2019, and the contractor then applied herbicides for invasive species. An inspection by the arborist was completed on November 7, 2019. The contractor mobilized in December 2019 and completed site surveys and the installation of Erosion and Sedimentation (E&S) controls. Clearing and grubbing began in February 2020. *Current activities include rework of incorrect elevations at the east wetland, rough grading for the athletic field, and removal of invasive plant species from the east wetland enhancement cell.*

Offsite Stream Mitigation (Paint Branch) – The Stream Mitigation construction contract was awarded after the award was approved by BPW on September 4, 2019, and NTP was issued to Environmental Quality Resources, LLC on September 5, 2019. The pre-construction meeting was conducted on October 24, 2019. The contractor mobilized in late November 2019. Installation of E&S controls was completed and approved by MDE in early February 2020. *Current activities include the Park Side mulch access road, in-stream diversions, and cross veins in the stream*

channel. Construction is planned to extend through 2021 due to separate seasonal construction moratoriums for forests and for streams that will affect construction of this project.

P3 Scope

Highlights of recent (through *early July 2020*) construction activities throughout the alignment include:

- Area 1: Utility relocations, drainage work, and retaining and noise wall construction continue in various locations. Abutment construction for the Connecticut Avenue and Rock Creek rail aerial structures, the Connecticut Avenue CCT aerial structures, and the Jones Mill underpass continued. *Abutment construction for the Jones Mill arches is scheduled for the week of July 13, 2020*. Construction of the new Talbot Avenue vehicular bridge continued, and wall construction is in process for the 16th Street bridge. Site preparation, utility relocation, and wall construction for the Lyttonsville Operation and Maintenance Facility (OMF) continues. CSX commenced removal/relocation of the nearby existing spur. Deck pans and shear studs were installed on spans 4 and 5 of the Silver Spring Transit Center aerial structure, while construction of Piers 6 and 7 and Abutment B continues.
- Area 2: At Manchester Place Station, construction of walls for the Plymouth Street access to the station continues. At the Plymouth Tunnel East cut-and-cover section, backfilling on the completed roof continues. *Portal wall excavation and lagging installation has started*. Through the tunnel, placement of ductbank conduits, reinforcing steel, and concrete for the maintenance/emergency walkway through the length of the tunnel *was completed*. Although final design for the Bethesda Enclosed Trainway (BET) is not yet issued, design is available for construction, *which is expected to start July 27, 2020*, on the existing grade beams.
- Area 3: Utility relocations, including water, sewer, gas, electrical, and communications, and installation of drainage continue throughout Area 3, especially along University Boulevard, on the University of Maryland (UMD) campus (where progress has benefitted from the absence of students due to COVID-19 restrictions), and along Kenilworth Avenue. Work on the abutment for the Northwest Branch Anacostia River Bridge continues. Utility relocation and excavation continued for installation of embedded track on Campus Drive at the CSX/Washington Metropolitan Area Transit Authority (WMATA) underpass. Deck placement on the Northeast Branch Anacostia River Bridge was completed except for the plinths, which will likely be delayed in order to allow the bridge to be used for construction vehicle access. Wall construction along Veterans Parkway continued. At the Glenridge OMF, *pre-final inspections of Level 3 began. Wiring; plumbing; Heating, Ventilation, and Air Conditioning (HVAC); and lighting work continues*.
- Corridor-wide: Site preparation continues for *Traction Power Substations (TPSSs) #7 and #8, and at the Glenridge OMF*. Of approximately 1,200 planned Overhead Contact

System (OCS) pole foundations, 94 have been constructed. To date, approximately 1 mile of communications infrastructure backbone ductbank has been installed.

See Appendix 10 of this report for construction photographs.

Real Estate Activities

As of *July 8, 2020*, the total number of planned property acquisitions is 601, including 464 privately owned properties and 137 public acquisitions. For the private properties, to date a total of 476 offers were made, including for parcels that were subsequently eliminated, and 234 offers were accepted. All of the original Exhibit 9 FFGA scope private parcels in the P3 contract are in MTA possession, some of which are properties that continue in condemnation under the State Highway Administration process. To date, 337 of the 464 private properties have completed settlement, 28 additional properties are pending settlement, and 98 condemnations are remaining to be settled. In August and September 2019, Montgomery County acquired the Woodmont Plaza property (formerly owned by Street Retail) in Bethesda, for which MTA had a construction Right of Entry (ROE). Montgomery County continues to prepare a deed of transfer of the Woodmont Plaza to MTA in return for MTA's transferring the Kaldis property (acquired to provide project access during the construction phase) to Montgomery County at the end of project construction. MTA has determined that federal funds were used in the acquisition of the Kaldis property and will therefore engage FTA in the transfer. The transaction continues to undergo mandatory State Clearinghouse Review while MTA evaluates potential alternatives to the lengthy State Clearinghouse Review. *A meeting has been set with the Maryland National Capital Park and Planning Commission for the week of July 13, 2020, to coordinate this transaction. A property swap is being considered and, once a potential solution is reached, FTA will be contacted to discuss the process moving forward.* All required public properties have been available for construction when needed.

As the project progresses and other utility relocation needs are identified, additional small parcel acquisitions are expected to be added to the total as utility down-guys. In December 2017, PLTC initially submitted a list of approximately 280 such parcels related to utility relocations and subsequently added to that list. MTA resolved that it will acquire these properties, rather than execute amendments to the utility agreement that would have the utility companies perform this function. MTA's ability to perform appraisals in house for these parcels or to waive appraisals for low-value, uncomplicated parcels is expediting the process somewhat. MTA continues to review such requests for additional properties from PLTC to eliminate the need for acquisition wherever possible. As of July 9, 2020, the list of additional acquisitions totals 175 parcels, including two parcels that PLTC is expected to request. Of these, 50 are public property and will be acquired by agreement, and 125 are private acquisitions. Also, most of the additional private parcels affect property already acquired or currently in the acquisition process. MTA is separately tracking the additional parcels (approximately 98% are for utility relocations) in its Right-of-Way (ROW) tracking system to best manage changes to parcels already acquired or in the process of acquisition. Including the two parcels that have not yet been formally requested by PLTC, 169 of the total additional 175 public and private properties are in MTA possession through rights of entry, options, and/or agreements as of *July 9, 2020*. Of the remaining six parcels, three are needed for

the construction phase but are not yet impacting construction progress, and three are not needed until after the start of revenue service. Sixty-four of the properties are filed for condemnation, excluding those that were subsequently optioned or settled, and 67 properties have completed settlement. The determination of cost responsibility between MTA and PLTC for each parcel has not yet been worked out; the immediate effort has focused on expediting the acquisitions, so that construction activities are not negatively impacted.

The project required a total of 176 relocations, of which 57 are residential and 119 are businesses. To date, all 176 identified relocations have been completed; however, costs for the moves completed continue to be filed in accordance with the applicable procedures. Also, MTA is monitoring terms of agreement of the property acquisitions discussed above that have not yet completed settlement, because some of them could potentially result in the need for additional relocations.

Properties that have not yet settled due to disputed compensation values have been going to trial in accordance with the ROW acquisition process. MTA is tracking actual acquisition costs versus planned expenditures, so that contingency can be effectively managed, and MTA shares this information with the PMOC. Settlement/condemnation values are 42% higher than the SCC budget less contingency, and a significant number of settlements have yet to be reached. An assessment of the forecasted costs yet to be expended for acquisition and relocation activities indicates that the remaining ROW-allocated contingency is not sufficient and that some of the project's unallocated contingency will need to be applied to the completion of the Purple Line project ROW scope. MTA is factoring these cost projections into its development of a Recovery Plan project cost estimate (see the Project Cost section of this report below).

MTA's delivery of properties to PLTC fell significantly behind the schedule committed to in the P3 contract. On the other hand, PLTC's progress toward needing those properties for construction is also significantly behind the schedule anticipated in the P3 contract. To manage its risk relative to availability of property for construction by the concessionaire, MTA assembled a task force of Purple Line project team members specializing in ROW, construction management, scheduling, risk management, and third-party agreements. During the peak property turnover periods of the project, the task force met on a weekly basis to review the forecasted property availability dates, based on the latest ROW schedule update compared to the concessionaire's progressed schedule, including the concessionaire's "early start" and "late start" dates for construction activity on each property. Recently, the task force has been meeting on an as-needed basis that is less frequent than weekly.

The relocation of the existing Parks Maintenance Facility to make way for the siting of the new Purple Line Glenridge OMF is being implemented as a negotiated/functional replacement. MTA's Procurement Department led the D-B contract solicitation for the Prince George's County facility. Refer to the Construction subsection of this report for the current status of this contract. Until construction is completed, the functions of the Parks Maintenance Facility have been relocated to a temporary facility and are currently not being impacted by events related to the construction of the replacement facility.

Utility and Third-Party Agreements

All major third-party agreements (specifically, those agreements with Washington Gas, Verizon, Potomac Electric Power Company [PEPCO], CSX, UMD, Montgomery County Parks, Prince George's County Parks, WMATA, Washington Suburban Sanitary Commission [WSSC], Montgomery County, and Prince George's County) were executed as of June 7, 2016.

After execution of its Third-Party Agreement, Verizon required that certain lines that are currently overhead be placed underground when they cross the light rail alignment. To minimize the total cost impact of this change, MTA and Verizon reduced the number of locations where Verizon lines crossing the alignment to 34. MTA is of the opinion that this reduction is a betterment, and therefore the added cost is Verizon's responsibility, but Verizon has not yet accepted that position. PLTC submitted its cost estimate for placing these 34 locations underground, and after extended cost negotiations between MTA and PLTC while the physical relocations were being implemented, a final change order value of approximately \$5.5 million was agreed upon in early March 2019. MTA plans to negotiate the cost responsibility with PLTC and Verizon after all major Verizon relocations are completed, and in the interim continues to carry this cost as a betterment outside of the FFGA scope.

In early June 2018, MTA and PLTP completed the negotiation of all remaining third-party agreements with the smaller utility and telecommunications (telecom) fiber companies. According to MTA, most of the minor fiber/telecom utilities are not co-located with the electrical utilities, and where they are, PEPCO's arrangement with the fiber/telecom utilities does not require PEPCO's relocation schedule to be driven by that of the minor fiber/telecom companies.

In addition, the need for amendments to existing executed agreements continues to be evaluated. The current significant items include:

- To date, the resolution of the design differences with CSX, as discussed earlier in this report, has been adequately handled through design review and concurrences, and has not resulted in the need to amend the CSX agreement.
- WSSC wanted the project to relocate a 66-inch underground water main that runs through the Glenridge OMF site. The project designers showed that it is acceptable for the water main to remain in place, but that it would need to be under significantly deeper cover if access is ever required. MTA agreed that the line will be relocated. In March 2020, MTA and WSSC agreed on a water main alignment primarily in the median of Veterans Parkway, as well as a strategy for completing the relocation. The original Purple Line project GEC is performing the design; WSSC is providing the material; and MTA will separately contract for the construction, thus avoiding impact to the P3 concessionaire's scope of work. Design is underway, and the 30% design package was submitted to WSSC for review on June 8, 2020. Design is scheduled to be complete in December 2020, and solicitation of the construction contract for the water main relocation is anticipated in the first quarter of Calendar Year (CY)2021. MTA is currently coordinating the construction approach and sequencing with PLTC to avoid conflicts while the two projects proceed in proximity near the Glenridge OMF. This water main

relocation is not schedule-critical, because the existing line will be abandoned in place after the relocation.

The project has been addressing its interface with Montgomery County Schools through the Third-Party Agreement already in place with Montgomery County. However, due to the specific concerns related to the schools and the safety and security of the children, MTA has drafted a separate Memorandum of Understanding (MOU) with the Montgomery County Schools system, which was approved by the School Board, and signed by the new School Superintendent, Montgomery County, and MTA. In the interim, work continued under an executed ROE. A similar MOU was negotiated between MTA and the Rosemary Hills School and was approved at the School Board meeting on February 12, 2019; it remains with the school for signature. The Rosemary Hills School also provided an interim ROE, and work at the school has continued unimpeded.

Project Delivery Method, Contract Packaging, and Procurement

The MTA project team identified P3 as the project delivery method for the Purple Line project. The majority of the capital cost of the Purple Line project has been packaged into a Design-Build-Finance-Operate-Maintain (DBFOM) P3 contract. This delivery method fits the state's legal definition of a P3 in that it involves a long-term, performance-based agreement between MTA and a private entity (the P3 "concessionaire") in which appropriate risks and benefits are allocated in a cost-effective manner between the contractual partners. The P3 concessionaire is performing some functions normally undertaken by the transit agency, but MTA remains ultimately accountable for the Purple Line and its public function.

MTA negotiated an approximate 36-year P3 contract, including nearly 6 years of construction and 30 years of operations, and on March 2, 2016, announced that PLTP had been selected as the P3 concessionaire. Commercial Close of the P3 contract occurred on April 7, 2016, and Financial Close occurred on June 17, 2016.

In late April 2020, PLTC notified PLTP that due to PLTC's forecasted schedule delays on the project (which did not receive agreement from MTA), PLTC intends to exercise the clause that allows it to terminate its contract with PLTP for the design and construction services under the P3 contract if delays exceed 365 days. MTA sent a formal request to PLTP for a response that includes a definitive path forward. On the response due date of May 14, 2020, PLTP submitted its response, which states that PLTP intends to continue to negotiate with PLTC to retain PLTC as part of the P3 concessionaire team. *On June 23, 2020, PLTP sent a formal Notice of Unconditional Election to Terminate the P3 Agreement, although PLTP indicated a willingness to negotiate a settlement. On June 24, 2020, MTA sent a Formal Notice of Concessionaire Default. This notice essentially refuted the validity of the PLTP delay claims and stated that if PLTP fails to perform, MTA has a number of options related to the agreement. Through early July 2020, construction activities continue at the level previously planned and apparently have not been affected by this development.*

Several smaller scopes of work were packaged and delivered separately from the P3 contract, including the Parks Replacement Maintenance Facility (D-B) and the environmental mitigation contracts (Design-Bid-Build).

Environmental

The FTA issued a ROD on March 19, 2014. The National Park Service (NPS) issued its ROD on July 16, 2014.

MTA has continued to submit environmental re-evaluations as required based on design advancement and other causes. To date, PLTC and MTA have prepared multiple packages, primarily for minor Limits of Disturbance (LOD) cases, which were submitted to FTA for review and have received FTA concurrence. *Recent and ongoing packages include:*

- MTA is currently preparing a request for submittal to FTA consisting of one minor LOD change for a utility tie-in on the UMD campus.
- The ATC for the Bethesda Station jet fan will be evaluated by MTA and is expected to result in less impact than the concept evaluated in the Environmental Impact Statement (EIS). *MTA is currently reviewing PLTC's design package for the Bethesda Station jet fan for NEPA compliance. Once the design is reviewed, documentation will be provided to FTA. The PMOC continues to monitor this issue.*

On August 3, 2016, in response to the lawsuit filed by the Friends of the Capital Crescent Trail against FTA, a federal judge filed his Order and accompanying Memorandum Opinion. In those documents, it was ordered that the ROD for the Purple Line project was vacated and remanded, and that a Supplemental Environmental Impact Statement (SEIS) be prepared, in accordance with the accompanying Memorandum Opinion. In a subsequent Order and Opinion filed on November 22, 2016, the judge in part revised the earlier Order by remanding to FTA the responsibility to determine whether an SEIS is required; however, the ROD remained vacated. On May 30, 2017, the judge issued his ruling that dismissed the lawsuit except for the reassessment of the impact of declining Washington Metro ridership in the Purple Line project's EIS. The Washington Metro ridership aspect of the ruling was immediately appealed by the Maryland Attorney General. On July 19, 2017, the U.S. Court of Appeals reversed the vacation of the ROD and set an expedited schedule for the appeals process. The appeals hearing occurred on November 1, 2017. The U.S. Court of Appeals issued its ruling on December 19, 2017, in which the judges ruled in favor of FTA and the project and ruled that the transit agencies would not have to conduct a new environmental study to examine other potential routes for the Purple Line.

The Friends of the Capital Crescent Trail filed a second lawsuit after the FFGA signing and groundbreaking ceremony was held on August 28, 2017. The September 19, 2017 Preliminary Hearing for this suit resulted in no temporary injunctions or restraining orders, and project construction is proceeding as the case progresses through the court system. On December 5, 2017, FTA and MTA filed a Motion to Dismiss. The plaintiffs subsequently amended and significantly revised the complaint in December 2017, and on March 1, 2018, MTA and FTA filed a Motion to Dismiss. On March 29, 2018, the plaintiffs filed their response. On March 5, 2019, the judge ruled in favor of the FTA.

The Friends of the Capital Crescent Trail filed a third lawsuit in January 2019, this time against U.S. Army Corps of Engineers (USACE). The USACE legal staff and the Office of the Attorney General are providing the defense. MTA filed a motion to intervene on behalf of USACE. In early May 2019, the plaintiffs filed an objection to MTA's motion, but during the week of July 15, 2019, the Court authorized MTA to intervene on behalf of USACE. In October 2019, USACE filed for a summary judgment to dismiss the case, and the plaintiffs filed their response; a hearing date was set for March 23, 2020. However, in late February 2020, the assigned judge recused himself from the case, and the scheduled hearing was canceled. In mid-April 2020, the District Court ruled in favor of the USACE/MTA motion for Summary Judgment to Dismiss, and the case was dismissed. The plaintiff subsequently filed an appeal on May 11, 2020, and the case continues in the legal process.

Environmental Mitigation

The project achieved the required mitigation for reforestation through the purchase of 82.5 acres of offsite credits (combined, in both Montgomery County and Prince George's County). This amount of offsite credits is expected to be more than needed, the design performed by the P3 concessionaire will confirm whether that is the case. PLTP's Forest Conservation Plan (FCP), which documented a need of 75.73 acres, was formally submitted to the Maryland Department of Natural Resources (DNR) in August 2016 for approval. The DNR concurred with the FCP on January 31, 2017, and the final approved FCP was received from DNR on July 31, 2017. As LOD cases are identified, they are also reviewed against the FCP credits to maintain an accurate accounting of the reforestation mitigation. In Maryland, need is based on land disturbance and not only forest removal. Through mid-June 2020, MTA's tracking of additional disturbance due to the progress of design and construction indicates a cumulative increase in the need for mitigation to date of 0.32 acre, bringing the total need to 76.05 acres, which is still within the amount of available offsite credits.

The Joint Permit Application for Wetlands and Stream mitigation was formally submitted to USACE and MDE in August 2016. In late February 2018, MDE issued its Non-Tidal Wetlands and Waterways permit in advance of the USACE permit, even though it was a joint application. However, because time had passed since the permit was drafted, MDE updated and issued the finalized permit the first week of April 2018. The USACE completed its NEPA and conditions review as well as its public interface, receipt of comments, and comment resolution, and issued the Section 10 404 Permit on March 14, 2018. This timing supported MTA's planned advertisement for the Wetlands and Streams Mitigation construction contracts. In October 2018, the project submitted a request to USACE and MDE to extend the duration of the permits until December 2021 to accommodate the longer construction periods resulting from construction moratoriums for forests and streams. The project received approval from MDE during the week of December 3, 2018 and received the USACE approval letter in mid-June 2019.

The project team is addressing the environmental mitigation for wetlands through the development of the offsite Ken-Gar location, which is implemented through a separate Design-Bid-Build construction contract administered by MTA. The construction contract was advertised on May 3, 2019, bids were received on June 10, 2019, and underwent MTA Procurement Department review,

and BPW approval of the award was received on September 4, 2019. See the Construction section of this report for further discussion of the progress on this contract.

The project team is addressing the environmental mitigation for streams through the development of the off-site Paint Branch location, which is implemented through a separate Design-Bid-Build construction contract administered by MTA. MTA advertised the Paint Branch Stream Mitigation construction contract on March 8, 2019. After the bid due date was extended several times, proposals were received on May 21, 2019, and underwent MTA review and evaluation. BPW approval of an award was received on September 4, 2019. See the Construction section of this report for further discussion of the progress on this contract.

The project continues with plans to address stormwater mitigation, beyond what can be mitigated on the project site, through retrofitting offsite locations in both Montgomery County and Prince George's County. For Montgomery County, the offsite stormwater mitigation sites, if needed, will be implemented via MTA stand-alone contracts. The Purple Line project initially estimated that approximately 17 acres of offsite mitigation would be required in Montgomery County in total. However, as PLTC advanced the project design, that estimate dropped significantly to essentially no needed offsite mitigation, although the estimate continues to vary as project details are finalized during design advancement. The Purple Line project committed to having put 5 acres of offsite stormwater mitigation for Montgomery County in place (i.e., approved by MDE) within the first two years after Financial Close of the P3 contract, which was by June 30, 2018. On June 14, 2018, MTA received final MDE approvals for a total of 5.53 acres of offsite stormwater mitigation, satisfying the contract requirement for 2018. In addition, in accordance with the requirements of the P3 contract, another 5 acres of credit was to be added to the "bank" by June 2019. The Purple Line GEC subsequently identified additional sites and, by the end of October 2019, received MDE's approval for a total of 10.02 acres, thus satisfying the requirements of the P3 contract for 2018 and 2019. MTA's subsequent discussions with MDE indicated that construction can proceed provided there is a positive balance of credits to construction impact; because this is the case, MTA will not be seeking any further additions to the current credit bank at this time. MTA continues to monitor the credit balance. MDE has also been reviewing PLTC's *onsite* mitigation for Montgomery County, which will determine the amount of construction of offsite mitigation that is required, if any. As of mid-June 2020, MTA assessed that onsite mitigation will be close to satisfying the construction mitigation requirements but could change to the positive or negative as PLTC's onsite mitigation continues to be reviewed/approved by MDE. The project continues to hold off advertising any construction of off-site mitigation sites until and unless it determines that the onsite mitigation is not sufficient. The implementation of the Prince George's County offsite stormwater mitigation sites is included within the scope of the P3 contract, although MTA assisted in the identification of potential sites. One of the two large Prince George's County Montpelier Basin sites identified during the P3 procurement phase has been determined to be the only site, if any, needed in Prince George's County. In June 2019, the final approval package for this site was fully executed by Prince George's County, the MDE, and the Prince George's County Soil Conservation District. The Montpelier site generates 6.13 acres of credit; current estimates of Prince George's County offsite stormwater mitigations needs are approximately 1 to 2 acres. For

the stormwater mitigation sites, once each 100% design package is submitted to and approved by the MDE-delegated authority or the county's Soil Conservation District, the credit represented by that package is available to support construction of the project, even though construction of the stormwater mitigation site, if needed, would not yet have been completed.

The joint MTA and UMD technical board continued its efforts related to the mitigation of noise, vibration, and electro-magnetic interference (EMI) at the UMD facilities. The following is the status of key related items:

- The noise and vibration report was received in December 2017, but it evaluated only the areas near critical campus buildings, resulting in approximately 1,300 feet of mitigation. However, the UMD agreement required the entire campus to be evaluated, which would lead to approximately 6,100 feet of mitigation. PLTP subsequently submitted an updated proposed less-than-full-campus alternative. UMD reviewers combined general design review comments (e.g., number and locations of crosswalks) with comments on the vibration mitigation proposal, which delayed progress, and UMD and PLTP continued to discuss the proposed extent of mitigation. *On June 23, 2020, UMD offered revised limits of the mitigation, representing a significant reduction of the previously estimated scope. However, this represented more than the original PLTP scope. UMD also requested additional crosswalk improvements. Coordination with UMD continues.*
- Construcciones y Auxiliar de Ferrocarriles (CAF) submitted its vehicle noise analysis report, and the Working Group provided comments. CAF and PLTP continue to work on the resolution of these comments. *MTA awaits the resubmittal of the vehicle noise analysis report.*
- The Working Group is also awaiting resubmittal of PLTP's OCS EMI design.

The Purple Line project team is submitting quarterly Environmental Mitigation Monitoring Reports for the project. The most recent report, for the first quarter of CY2020, was submitted in May 2020.

B. Project Management Plan and Sub-plans

Project Management Plan

Purple Line Project Management Plan (PMP) Version 10 was reviewed in accordance with Oversight Procedure (OP) 20 for a PMP at the FFGA execution stage of the project. Certain areas of the PMP were noted as needing to be updated after development of the relevant documents by the concessionaire in accordance with P3 contract requirements, and the PMOC recommended that the PMP be revised and resubmitted after execution of the FFGA. MTA commenced an update of the PMP in December 2017 and submitted PMP Version 11 in mid-August 2018. However, because another major update was imminent, the PMOC review of the PMP was deferred until PMP Version 12 was submitted. On January 3, 2019, MTA submitted PMP Version 12, dated December 14, 2018. The PMOC completed its review in accordance with OP 20 for a project in the construction phase and, on May 9, 2019, submitted a draft OP 20 report to FTA for review.

FTA review comments were received, and the report was issued final on June 13, 2019, requiring revision and resubmittal. On February 3, 2020, MTA submitted PMP Version 13 to address the PMOC comments on Version 12. *The PMOC will complete its review of PMP Version 13 in July, and will submit its findings, opinions, recommendations, and conclusions to FTA.*

Because of the impacts of the lawsuit filed by the Friends of the Capital Crescent Trail, it has been challenging for MTA to follow strictly the procedures and practices established in the project's PMP. The most significant deviations from the PMP continue to relate to the project schedule and to any costs associated with schedule recovery. According to the PMP, the master schedule should be updated monthly; however, the most recent approved master schedule update is as of March 15, 2017. Now that the FFGA has been executed, MTA and the P3 concessionaire have produced a plan to collaborate on schedule recovery and to update the project schedule accordingly and have started to work to achieve those objectives. See the Project Schedule section of this report for further details. After MTA reaches agreement with PLTP on schedule recovery, the related impact to project cost, if any, will be negotiated.

Safety and Security Management Plan

The PMOC reviewed the Purple Line project's Safety and Security Management Plan (SSMP) Version 6, dated October 22, 2014, in accordance with OP 22 for a project at the FFGA execution stage in February 2016. The PMOC review found that the SSMP was compliant with FTA content requirements for execution of the FFGA, but the PMOC requested that MTA resubmit the SSMP after execution of the FFGA and to address the comments in the PMOC report with updated information from the P3 concessionaire. MTA completed an update of the SSMP, incorporating the involvement of the P3 concessionaire, and submitted SSMP Version 7, dated June 14, 2018, on August 13, 2018. Because the project had experienced significant advancement since the last review of the SSMP had occurred, the PMOC first conducted a preliminary, or cursory, review to ensure the completeness of the plan before investing in the effort of a detailed review. The PMOC completed the cursory review of SSMP Version 7 in accordance with OP 22 and submitted its comments to MTA on September 7, 2018. MTA updated the SSMP to address the cursory review comments and on November 1, 2018, submitted SSMP Version 8, dated October 24, 2018. The PMOC forwarded a copy of SSMP Version 8 to Maryland Department of Transportation (MDOT), the State Safety Oversight Agency (SSOA) for the project, which conducted a review concurrent with the PMOC's OP 22 review. The PMOC met with the SSOA in December 2018 and found that the SSOA comments were similar to the PMOC's findings. The PMOC submitted a draft OP 22 report that also incorporated the SSOA review to FTA for review on January 4, 2019. FTA review comments were received, and the report was issued final on July 3, 2019, requiring revision and resubmittal. Revision 10 of the SSMP, which MTA prepared in order to address the PMOC/SSOA comments on SSMP Revision 8, was submitted to FTA/PMOC on January 31, 2020. The SSOA completed its review and discussed its comments with the PMOC. SSOA comments were returned to MTA on March 3, 2020. *During July 2020, the PMOC continued an effective collaboration and coordination process with the Maryland SSOA and submitted the Draft SSMP Version 11 review report (OP 22) to FTA. The SSMP Version 11 will be finalized and submitted to FTA by the end of July 2020.*

Quality Assurance Plan

In August 2017, MTA submitted for FTA/PMOC review a complete Quality Assurance Plan (QAP) update, the MTA Purple Line Quality Assurance Plan Revision 8.0, dated May 2017, which supersedes the Purple Line Project Document for Quality that had been previously reviewed and accepted with comments. The MTA Purple Line QAP Revision 8.0 incorporates the Concessionaire Quality Program (CQP), the Concessionaire Design Quality Plan (CDQP), and the Concessionaire Construction Quality Plan (CCQP), as well as an updated Document Control Plan. The PMOC completed its review of QAP Revision 8.0 in accordance with OP 24 in October 2017, and found that the documents generally conformed to the OP. The PMOC provided minor comments that could be addressed during the next update. The concessionaire's updated quality plans (CQP Revision 03, CDQP Revision 4, and CCQP Revision 3.1) have all been finalized by PLTP and approved by MTA. MTA has also approved the latest updated PMC's QAP (Revision 9) and Document Control Plan (Version 5). In September 2019, MTA submitted the collection of plans to FTA and the PMOC. The PMOC completed the OP 24 review of all submitted documents and in November 2019 provided the draft OP 24 report to FTA for review and comment. FTA's comments were received, and the report was issued as final on January 2, 2020, with it being noted that the collection of plans is acceptable at the time of the report and that there are several minor comments to be addressed in the next update of the plans.

Real Estate Acquisition Management Plan

The PMOC reviewed the project's Real Estate Acquisition Management Plan (RAMP) Version 10, dated January 2, 2019, in accordance with OP 23 for a project in the construction phase. The PMOC's draft OP 23 report was submitted to FTA for review and comment on January 31, 2019. After receiving FTA comments, the PMOC issued the final OP 23 report on February 22, 2019; the final report documented the acceptance of the Purple Line RAMP Version 10 for a project in the construction phase. On February 4, 2020, MTA submitted the project's RAMP Version 11 as an annual update of the plan. In July 2020, the PMOC submitted its review of the RAMP (OP 23) to FTA, including its findings, opinions, recommendations, and conclusions.

Fleet Management Plans

The Purple Line project's Rail Fleet Management Plan (RFMP) Version 7.0, dated February 15, 2016, is the version of the plan reviewed by FTA and the PMOC, and it incorporates information from the selected P3 concessionaire's proposal. The PMOC completed its review of RFMP Version 7.0 and documented in its OP 37 RFMP review report issued on May 27, 2016, that RFMP Version 7.0 met the requirements of OP 37 for execution of an FFGA. The review also recommended that MTA submit an update to RFMP Version 7.0 to FTA and the PMOC to reflect the P3 concessionaire's own RFMP after a review by MTA confirmed that it meets the requirements of the Purple Line project. The P3 contract requires PLTP to submit its RFMP for MTA review and approval within 90 days of the June 17, 2016 P3 contract Financial Close, to then submit the RFMP with the LRV Preliminary Design submittal, to submit an updated RFMP with the LRV Final Design submittal, to submit a further updated version no later than six months before the scheduled beginning of revenue service, and to update the RFMP annually once the

project is in revenue service. MTA received, reviewed, and approved PLTP's Purple Line RFMP Revision 0, dated June 22, 2016, after Financial Close, in accordance with contract requirements. At the time of the LRV Preliminary Design submittal, MTA and PLTP reviewed the RFMP again and determined that Revision 0, dated June 22, 2016, was still valid. MTA submitted PLTP's RFMP Revision 0, dated June 22, 2016, to the FTA/PMOC. PLTP's RFMP Revision 0 version had not yet had the benefit of any significant engineering by PLTP after contract award and has not been reviewed by the PMOC in accordance with OP 37.

The current version of the Bus Fleet Management Plan (BFMP) is BFMP Version 8.1, which was submitted for FTA/PMOC review on February 12, 2016. The PMOC completed its review of BFMP Version 8.1 and on March 4, 2016, issued the final OP 37 BFMP Review Report, concluding that the BFMP met the requirements of OP 37 for the execution of an FFGA for the Purple Line project.

Risk and Contingency Management Plan

The current version of the Risk and Contingency Management Plan (RCMP) is Version 10, dated May 2016. The PMOC's OP 40 review found that RCMP Version 10 met the requirements of OP 40 for an RCMP at the FFGA stage of a project. However, due to impacts of the lawsuit filed by the Friends of the Capital Crescent Trail, MTA had not been able to establish routine bimonthly Risk Management Committee meetings or formal updates of the Risk Register, as required by the RCMP. MTA resumed bimonthly meetings in October 2017, after the lawsuit was resolved and the FFGA was executed. MTA completed an update of the project's Risk Register in March 2018 and continues to conduct subsequent periodic updates and provides copies of those updates to the PMOC. On January 3, 2019, MTA submitted RCMP Version 12, dated January 2019, as part of its annual update of the major PMP sub-plans. In early 2020, MTA commenced another update to the RCMP to incorporate the results of the latest quantitative risk assessment and will incorporate the results of the P3 concessionaire/MTA settlement once those details are available.

Safety and Security Certification Plan

The current version of the Purple Line Safety and Security Certification Plan (SSCP) is Version 3 dated November 4, 2014, which was reviewed as a companion document to the SSMP. The PMOC review found that the SSCP Version 3 met the FTA requirements in support of the FFGA application. MTA submitted SSCP Version 4 on February 3, 2020, in conjunction with the updated SSMP submittal (see the Safety and Security Management Plan subsection, above). The SSOA completed its review of SSCP Version 4 and discussed its comments with the PMOC.

C. Project Management Capacity and Capability

Through the PMOC's observations and discussions with MTA, especially with MTA Transit Development and Delivery (TDD) and Purple Line project management personnel, the PMOC has noted that MTA has been responsive to finding and assigning management capacity and capability, as needed, to sufficiently complete the project in compliance with applicable FTA requirements. These efforts have included bringing talent, either MTA or MDOT personnel, or consultants, onto

the project to manage the current needs, such as planning, P3 procurement and contracting, real estate acquisition, and construction.

Recent (June 2020) Purple Line project staffing activity has included the following:

- At the end of March 2020, the MTA Executive Director of TDD left the project team to take a new position. The MTA Chief Engineer served as Acting TDD Executive Director while the position was filled. *On June 17, 2020, MTA brought Mathew Pollack on board to serve as the TDD Executive Director.*
- In March 2020, the Purple Line Project Director announced that he would be leaving the project team to take a position with a different transit agency; however, because of business disruptions caused by the COVID-19 pandemic, the date for his departure was extended until April 22, 2020. *Upon the hire of the new TDD Executive Director, Vernon Hartsock is transitioning to serve in the role of the Acting Purple Line Project Director, supported by a team of consultants. MTA is in the process of selecting a permanent Project Director.* MTA worked through its internal process to create a position for an additional Deputy Director (MTA employee), who will have experience focused on engineering and contract management, to assist the current Project Director on the Purple Line project. *MTA is working to fill this Deputy Director position. Other open positions include Director of Safety, Media Relations Manager, Systems Safety Manager, and several special projects positions.*
- The current MTA Transit Development and Delivery Chief Safety Officer, who is the highest-ranking safety manager on the Purple Line project, announced intentions to retire *in September 2020.* He is continuing to assist with filling the project position and transitioning project activities to his replacement.

The PMOC continues to monitor the effectiveness of the MTA staff and the added personnel resources from consultants, MDOT, and other modal administrations as they have been integrated into overall MTA project management of the Purple Line project. To date, the PMOC has found the staff changes and additions to be appropriate and effective.

D. Project Cost

Appendix 6 of this report summarizes the project's current actual expenditures and estimate at completion and compares them to the project budget as reported in MTA's June 1, 2016 SCC Workbook, which is the basis of the project's FFGA. *The project documented expenditures totaling \$1,396.4 million through June 30, 2020, for MTA costs and through May 31, 2020, for PLTP's costs.* Refer also to Table 1 (FFGA Core Accountability Items) in the Executive Summary section of this report for details on the project's planned and actual expenditures.

In the cost estimate presented in the June 1, 2016 SCC Workbook, which is the basis for the FFGA, contingency in Year of Expenditure dollars is as follows:

Allocated Contingency	\$59,500,464
Unallocated Contingency (SCC 90)	\$90,535,748

Total Contingency	\$150,036,212
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Through *June 30, 2020*, the following is the remaining contingency on the project:

Allocated Contingency	\$20,582,098
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Unallocated Contingency (SCC 90)	\$10,792,334
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Total Remaining Contingency	\$31,374,432
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There are multiple change orders pending or proposed under the P3 contract that could have potential additional cost impact on the project. Working with the PMOC, the Purple Line project team developed a three-part change order tracking system that documents:

- Executed change orders (accounted for in the remaining contingency listed above)
- Pending change orders, which are those are pending execution, and proposed change orders, which are those that are currently being priced by the contractor or that are in various stages of negotiation
- Potential change orders, which are those that the contractor has formally submitted to protect specific rights and privileges, but which have not been either fully developed by the contractor or accepted by MTA

The PMOC monitors the executed, pending, proposed, and potential change orders, which are reflected in monthly updates to the change order logs, and will continue to review any noteworthy changes with the project team.

During May and early June 2020, MTA also continued in earnest to complete negotiating and refining a settlement agreement on the change orders submitted by the P3 concessionaire claiming cost impacts from the delayed FFGA execution. Final resolution of these cost impacts will also depend on the resolution of the schedule (see the Project Schedule section of this report, below). There is significant risk that the project cost as reflected in the FFGA will be affected, and it is anticipated that an MTA Purple Line project Recovery Plan, including a revised project cost estimate with adequate cost contingency to address remaining project risks, will be required. Accordingly, MTA continues to prepare a draft Recovery Plan in accordance with the requirements of the FFGA, and cost, schedule, and risk details will be incorporated in the Recovery Plan after the completion of the settlement negotiations with the P3 concessionaire. The PMOC provides feedback on the Recovery Plan development as it progresses.

Project Funding

The funding for the project, as reflected in Attachment 3 of the FFGA, is shown in Table 3, which follows.

Table 3 – Sources of Federal Funding and Matching Share Ratios

	Costs Attributed to Source of Funds	Federal/ Local Match Ratio within Source	All Federal Funds	Local Funds*
Federal - 5309 New Starts	\$2,362,030,286	38/62	\$900,000,000	\$1,462,030,286
Federal - Other (FTA Section 5307)	\$45,000,000	80/20	\$36,000,000	\$9,000,000
Total	\$2,407,030,286		\$936,000,000	\$1,471,030,286
Overall Federal Share of Project			38.9%	
New Starts Share of Project			37.4%	

* Local funds include costs funded by the MDOT TTF as well as the P3 concessionaire funded costs. The P3 concessionaire uses funds from the Transportation Infrastructure Finance and Innovation Act, private financing, and equity to fund its costs. The P3 concessionaire-funded costs are treated as “Local Match” for the 5309 New Starts funds.

Standard Cost Category Worksheets

Appendix 7 presents the Purple Line project cost estimate, based on the June 1, 2016 update of the SCC Workbook in FTA’s SCC format, which is the basis of the FFGA.

E. Project Schedule

The PMOC receives copies of the master project schedule updates, including the native Primavera scheduling software files, once the update has been approved by MTA. The March 15, 2017 progress update of the master project schedule was approved, as noted, in May 2017 and continues to be the latest approved version of the schedule. Later submissions of schedule updates from PLTC have not been approved for various reasons, but primarily driven by the inability of MTA and the P3 concessionaire to agree on the schedule impacts of the approximately one-year delay in the execution of the FFGA. However, in response to a letter that FTA issued to MTA in early August 2018 expressing concerns about the amount of time that the project had advanced without an approved schedule, MTA prepared a working schedule update of the master project schedule. The working schedule update was based on the negotiations of the P3 contract schedule occurring at the time, which had been ongoing between MTA and PLTP since late 2017 and which have been detailed in prior PMOC Monthly Monitoring reports; however, the update is not based on a mutually agreed-upon P3 contract schedule. The working schedule update is titled “MTA Master Schedule August 2018” and was progressed through August 31, 2018. Although the MTA Master Schedule August 2018 is not a final recovery schedule that reflects the mutual agreement of MTA and PLTP, it does provide a more accurate presentation of the current project status than the last approved project schedule, which is dated March 15, 2017.

The most significant differences between the last approved project schedule (March 15, 2017) and the MTA Master Schedule August 2018 (the proposed new baseline schedule) were a change in the schedule critical path from going through Segment 4 (Plymouth Tunnel) to going through Segment 7 (Riverdale aerial structure), and a slip in the “PLTP Commence Revenue Service date” from March 11, 2022 to October 28, 2022. However, according to the MTA Master Schedule August 2018 (the proposed new baseline schedule), the Purple Line is still scheduled to start revenue service earlier than the FFGA Revenue Service Date (RSD) of December 31, 2022.

MTA reports that PLTC is currently submitting monthly schedule progress updates for its scope in accordance with the P3 contract. MTA then performs monthly progress updates of the MTA master schedule based on the progress updates received from PLTP as well as from its internal staff, relative to the MTA Master Schedule August 2018 baseline. *MTA reports that the progress updates with a data date of May 31, 2020, as submitted by PLTC, have not been accepted by MTA.*

The most recently approved schedule progress update submitted by MTA is the February 29, 2020 progress update of the MTA master schedule. It continues to show the start of revenue service occurring before the FFGA RSD of December 31, 2022, with the major interim milestones of the Commencement of Trial Running of June 8, 2022, and the PLTP Commencement of Revenue Service of December 26, 2022. A copy of the critical path of the February 29, 2020 progress update of the MTA master schedule is included in Appendix 8 of this report. The PMOC notes, however, that this is not a contractually enforceable schedule.

Once the intensity of the schedule negotiations heightened in fall 2019, the P3 concessionaire submitted a revised, fully cost-loaded schedule in response to the terms of the negotiations. The schedule submitted by the P3 concessionaire, which continues to be under MTA review and negotiation, reflects a phased project opening, with the first phase opening at the end of 2022, and the second phase opening in mid-2023. However, the phased opening schedule has not yet been accepted by both parties as the contractually governing schedule for the project. *Until an agreement is reached otherwise, MTA is using a single-phase opening schedule and is monitoring PLTP's progress through its achievement of interim area/segment milestones for both civil construction work and transit system installation.*

There is significant risk that the project schedule as reflected in the FFGA will be negatively affected, and it is anticipated that a Recovery Plan for the project, including a revised contractually enforceable project schedule with adequate schedule contingency to address remaining project risks, will be required. Accordingly, MTA continues to prepare a draft Recovery Plan in accordance with the requirements of the FFGA, and cost, schedule, and risk details will be incorporated in the Recovery Plan after the completion of the settlement negotiations with the P3 concessionaire.

Key Milestones

Table 4 shows the current key milestone dates for the project for the last approved (March 15, 2017) progress update of the master project schedule, the MTA Master Schedule August 2018 (the proposed new baseline schedule), and the February 29, 2020 progress update of the MTA master schedule.

Table 4 – Purple Line Project Key Milestone Dates

Activity	Latest Approved Project Schedule (March 15, 2017)	MTA Master Schedule August 2018 (working baseline)	MTA Master Schedule February 29, 2020 Update
Locally Preferred Alternative Approval Date	08/04/2009 (A)*	---	---
FTA Approval to Enter Preliminary Engineering	10/07/2011 (A)	---	---
FTA ROD	03/19/2014 (A)	---	---
Issue Final RFP for P3 Concessionaire	07/28/2014 (A)	---	---
FTA Approval to Start Enter Engineering Phase	08/28/2014 (A)	---	---
Issue Addenda 4 through 6 to the P3 RFP	07/2015 through 11/2015 (A)	---	---
P3 Technical Proposals Due	11/17/2015 (A)	---	---
P3 Financial Proposals Due	12/08/2015 (A)	---	---
Evaluation and Announcement of Selected P3 Proposer	01/02/2016 through 03/02/2016 (A)	---	---
BPW Approval of P3	04/06/2016 (A)	---	---
P3 Commercial Close	04/07/2016 (A)	---	---
Limited Notice to Proceed for P3 Engineering	04/07/2016 (A)	---	---
MTA submit FFGA Application	05/24/2016 (A)	---	---
P3 Financial Close	06/17/2016 (A)	---	---
FFGA signed	08/22/2017 (A)	---	---
Start of First Major Construction Activity	08/28/2017 (A)	---	---
All Significant ROW Acquisition and Relocation	As needed by construction	---	All P3 contract Exhibit 9 properties in possession
Commencement of Trial Running	---	03/09/2022	06/08/2022
P3 Ready to Commence Revenue Service	To Be Determined	10/28/2022**	12/26/2022
MTA Opens for Revenue Service	3/2022	---	12/26/2022
Revenue Operations Date (includes contingency)	12/31/2022	---	---
FFGA RSD (includes contingency)	12/31/2022	12/31/2022	12/31/2022

* A = Actual

** P3 Revenue Service Date is based on MTA's working version of an updated integrated master project schedule based on earlier negotiations between MTA and the P3 concessionaire but which will likely be superseded by the P3 fully resource-loaded phased schedule, once negotiations have concluded and schedule agreement is reached.

90-day Look-ahead

The critical 90-day (*mid-June through mid-September 2020*) look-ahead activities for the project, based on the current project schedule and discussions with MTA are shown in Table 5, which follows.

Table 5 – Purple Line Project Critical 90-Day Look-ahead

Scheduled Date	Activity / Event
Ongoing	P3 submittal/MTA review of design packages
Ongoing	MTA and PLTP collaboration for agreement on a mitigated project schedule and associated project cost
July 16, 2020	Compete final grading of the reconfigured New Carrollton Kiss and Ride
July/August 2020	Commence construction on the Spring Street vehicular bridge over CSX/WMATA/Purple Line tracks
August 1, 2020	One of the two embedded tracks in Campus Drive at the CSX/WMATA underpass to be installed before the complete road closure period ends
August 2020	Hensel Phelps to start station finishes work at Manchester Place Station
August 6, 2020	Complete Abutment A (in Kenilworth Avenue) for the Kenilworth-Riverdale Aerial Structure
August 17, 2020	Form, reinforce, and place College Park Station platform slab
September 3, 2020	Start installation of Riverdale aerial structure steel girders over the Kenilworth-Riverdale intersection

Critical Path Activities

In the MTA master schedule February 29, 2020 update, for which final agreement with PLTP has not yet been reached, the critical path goes through Area 3, Segment 7 (primarily the “test track”), including finalization of approvals from MDE; civil, track, traction power, OCS, and communications construction along Veterans Parkway and Ellin Road, light rail vehicle (LRV) site and dynamic testing; emergency drills; trip time testing; revenue service demonstration testing; safety certification; and other activities leading to revenue service.

F. Quality Assurance/Quality Control

The project’s Quality Assurance/Quality Control (QA/QC) is addressed in Section 10 of the PMP, Quality Program Plan, and the updated MTA QAP Revision 8.0, which incorporates the implementing quality plans prepared by PLTC. The most current versions of the PMP, the Purple Line Document for Quality, and the QAP are as discussed in the Project Management Plan and Sub-plans section of this report. MTA also submitted to FTA the package of inter-related quality plans prepared by the P3 concessionaire after they were reviewed and approved by MTA.

The project continues to conduct its monthly meeting to review the QA/QC activities performed by the Purple Line project team, including those activities performed by the P3 concessionaire, the PMC, and the GEC. Documentation from this meeting is distributed and maintained. The PMOC performs an overview of each package of documentation that is distributed and conducts more detailed reviews periodically.

The project’s Monthly Progress Report to FTA also contains a brief summary of the significant current QA/QC activities/events on the project, including quality audits and quality reviews of PLTC submittals. The PMOC reviews QA/QC topics with MTA and the PMC at the its periodic recurring monitoring meetings.

G. Safety and Security

PLTP has conducted 44 Preliminary Hazards Analysis (PHA) workshop sessions to date. These workshops continue to be held to resolve MTA's comments on the PHAs completed to date. PLTP's Safety and Security Working Group (SSWG) continues to oversee the hazard management process. MTA has representation on the group in order to provide comments and insight but does not vote on topics before the PLTP SSWG.

To support the ultimate Safety and Security Certification of the Purple Line project, the PLTP System Safety team completed development of its first Design Criteria Conformance Checklist (DCCC) in May 2017 and submitted it to MTA for approval. However, the DCCC did not meet MTA expectations and was returned for revision and resubmittal. PLTP then did not prepare DCCCs until January 2018, when PLTP resumed preparing them, because MTA stated that it would reject any Final Design Packages submitted without an associated DCCC. MTA (assisted by the PMC) reviews the DCCCs as part of the Final Design Package, according to the established submittal review process. According to PLTP, the DCCCs are being verified before the issuance of RFC packages. *To date, an estimated 94% of the DCCCs have been verified, although none have been received over the past month.* All prior comments on PLTP's Certified Elements List (CEL), which includes operations and maintenance and system integration testing elements, have been resolved, and CEL Revision 2 has been accepted. Regarding the Certified Items List (CIL), PLTP addressed MTA comments, and the comments have been resolved. The CIL Revision 1 has been accepted. PLTP is now preparing the Construction Specification Conformance Checklists (CSCCs), although no CSCCs have yet been submitted for review as of *early July 2020*. *MTA plans to conduct an audit of PLTP's CSCCs soon once they provide PLTP 30 days' notice.*

MTA chairs a Safety and Security Certification Committee (SSCC) that reviews, comments on, and approves any PLTP hazard management and safety and security certification issues. The first meeting of the MTA SSCC was conducted on March 20, 2018. Since July 11, 2018, the meeting has been held monthly on the second Wednesday of the month and will continue as a monthly meeting until the level of activity requires more frequent meetings. *The most recent meeting of the SSCC was held on July 8, 2020, during which the following items were discussed:*

- MTA again requested that PLTP provide a detailed schedule for Safety and Security Certification activities. PLTP has not yet responded to this request.
- MTA has requested additional details on the failure modes, Effects, and Criticality Analyses for LRV traction motor bolts, for which some of the information will not be available until closer to the start of revenue service. MTA is currently requesting the torquing procedure used for these bolts during shop assembly, recognizing that field torquing procedures may not be available until later. MTA will continue to track this item as the information to complete its review becomes available.
- MTA is awaiting PLTP's resubmittal of the Plymouth Tunnel DCCC addressing MTA's comments on the initial submittal.

- MTA requested that PLTC perform a PHA of the high temperature hazard resulting from PLTC's design that shows a sidewalk grate for the exhaust from the emergency diesel generator at Elm Street. MTA commented that the sidewalk-level release does not comply with design requirements.
- A Non-conformance Report is anticipated resulting from the geometry survey of the as-erected Silver Spring Transit Center flyover aerial section, which is undergoing review by the designer (HNTB).

PLTC completed its Threat and Vulnerability Assessment (TVA) process when MTA accepted and verified the comment responses and approved PLTC's TVA on July 15, 2019.

The MTA Purple Line Safety and Security personnel reviewed and commented on the PLTC design submittals, including those of the vehicle supplier.

MTA continues to conduct bimonthly Fire/Life Safety meetings with Montgomery County and Prince George's County, respectively. The meetings provide a basis for the counties' emergency responders to understand the features of the Purple Line systems and to resolve any concerns. The Montgomery County Fire/Life Safety meeting was held on May 21, 2020. The emergency responder access points in Montgomery County were reviewed, but since the Montgomery County Fire Rescue Service attendees could not review the drawings, the final drawing package will be sent for review when completed. Also, a separate breakout session to discuss the Silver Spring WMATA station fire protection system calculations was held on June 10, 2020. *The Prince George's County Fire/Life Safety meeting, held on June 18, 2020, reviewed the emergency responder access plan and included discussion that private parcels, in particular, must have clear access.*

As required by the P3 contract, PLTP is responsible for directly implementing many of the safety and security requirements for the project, including those for construction safety, and the collection and maintenance of the Occupational Safety and Health Administration (OSHA) safety statistics for the project. PLTP's OSHA statistics for the project to date are:

- TCIR (Recordable Rate):
 - Actual: 0.56
 - PLTP goal: 0.45
 - National average: 2.8 (for heavy civil construction)
- Days Away, Restricted or Transferred (DART) (DART-L) Rate:
 - Actual: 0.17
 - PLTP goal: 0.00
 - National average: 0.9 (Construction – heavy civil)

See Section B of this report for the status of the sub-plans of the PMP related to safety and security. Appendix 1 of this report includes extensive additional quarterly safety and security-related information for the Purple Line project.

H. Americans with Disabilities Act

The PMOC confirmed that the Design Criteria Manual applicable to the Purple Line project addresses Americans with Disabilities Act (ADA) requirements, including references to the requirements in the Maryland Accessibility Code (MAC), the ADA Accessibility Guidelines for Buildings and Facilities, and the ADA Standards for Transportation Facilities.

Accessibility and compliance with the ADA are required as part of the functional requirements for stations and guideway and as part of the codes and standards for LRVs within the P3 contract (Book 2, Part 2) for the Purple Line project. MTA and its consultants review the design packages that PLTC prepares, in accordance. Based on project reviews conducted by the PMOC, MTA has confirmed that it includes ADA compliance in its QA oversight reviews of PLTC's design packages. A full-time Purple Line project Maintenance of Traffic construction representative also monitors whether temporary pedestrian accommodations during construction continue to comply with ADA requirements. ADA compliance is included in the PMOC's periodic project reviews, during which timely project ADA-related items are discussed. Such discussions during the PMOC's most recent reviews identified no current ADA-related issues.

I. Buy America

The PMOC has discussed Buy America requirements with the Purple Line project team during the PMOC project review meetings and has confirmed that MTA understands that Buy America compliance applies not only to the rail vehicles but also to the procurement of all manufactured products, including all iron and steel. MTA is also aware that domestic manufacture of all federally funded procurements is required and should be certifiable. Compliance with Buy America is contained in MTA's standard clauses for its procurements, and the P3 contract contains explicit Buy America language in its Appendix 16.

As designs are reaching finalization, PLTC is starting to encounter more incidences when the supply of as-designed commodities that are compliant with Buy America provisions may not be available. However, because PLTC is responsible for the design and has committed to compliance with Buy America provisions, MTA is holding PLTC responsible for complying with the regulations and the P3 contract in this respect. The Purple Line project team continues to spot check materials being used in ongoing construction, and especially utility relocations, because Buy America compliance of utility-supplied materials has historically been more troublesome and because utility relocation constitutes a significant percentage of the current construction activity. During November/December 2019, MTA QA inspectors issued Quality Oversight Assessment Reports (QOARs) related to two potential Buy America non-compliance cases at the OMF. PLTC submitted responses to these QOARs 055 and 056 in January 2020, and MTA replied in disagreement with PLTC's conclusions in its submittal. *As of early July 2020, QOARs 055 and 056 remain open.*

PLTC passed the Buy America requirements on to the vehicle supplier, CAF. The Buy America Pre-Award audit was conducted by Virginkar and Associates, Inc., which concluded that there is reasonable certainty that CAF will satisfy the Buy America requirements as stated in 49 Code of

Federal Regulations (CFR) 661. MTA's interpretation is that, because the vehicle RFP was advertised before December 4, 2015, the 49 CFR 661 Public Interest Waiver that limits domestic content to a minimum of 60%, as opposed to the escalating domestic content requirements of the Fixing America's Surface Transportation (FAST) Act, applies in this case. An intermediate post-award Buy America audit was conducted of CAF's Elmira, New York facility, for added confidence that the post-delivery audit will not identify issues, during the week of October 2, 2017. There were no significant findings, and based on the audit, the domestic content of the LRVs is currently estimated at approximately 62%, compared to the required 60% for these vehicles. CAF is targeting 65% domestic content in the completed vehicle. MTA has also been in communication with the U.S. Maritime Administration regarding the use of U.S. Flagship carriers for the transport of carshells from Spain to the United States for final assembly.

J. Vehicles and Vehicle Technology

The vehicles are 136-foot-long, multiple articulated LRVs operated as single-car maximum length trains. Because of the vehicles' extended length, only 25 vehicles (21 and 4 spares) will be provided under the FFGA for the opening year.

PLTP executed the LRV contract with CAF on June 17, 2016 and issued CAF NTP on July 5, 2016.

Vehicle carshell manufacturing activities, which are coordinated with design progress, continued until the facility in Spain was shut down in late March 2020 due to supply chain issues and to limit the spread of COVID-19. The facility in Spain reopened at approximately 50% of its workforce capacity during the week of April 20, 2020 and is currently fully functional on the Purple Line project. The final assembly facility in Elmira, New York, was shut down in early April 2020 due to New York State restrictions related to COVID-19 and reopened on May 18, 2020, at 50% of its workforce capacity. *As of early July 2020, both the Spain and Elmira facilities are at 100% staffing levels.*

The following paragraphs discuss the status of LRV manufacturing as of mid-June 2020.

In Spain, resolution of MTA's comments on the Intermediate Design packages has been completed, and resolution of comments on the Final Design packages continues, although *98% of the Final Design review comments have been closed*. The current status of the carshell manufacturing in Spain is:

- To date, 83 carshell segments have been completed (*Spain and Elmira combined*).
- Of those, 53 have been painted, including the 42 that were shipped to and received in the United States for final assembly, and *11* additional carshells that are being prepared for shipment to the United States.

The final assembly of vehicles is being performed in CAF's facility in Elmira. There are currently 42 carshells (8 full vehicles and 2 of the 5 carshells for the ninth vehicle) in Elmira. CAF completed modifying the power supply to its Elmira test track from 750 volts to 1,500 volts, and LRV 101 was operated on the Elmira test track under its own power in December 2019. The first

two vehicles, LRVs 101 and 102, continue in static testing. Final assembly of all five segments of the third through eighth vehicles and the first two segments of the ninth vehicle continue in various stages of final assembly in Elmira. Regarding factory testing (in Elmira), all Factory Test Procedures have been submitted to MTA for review, and the remaining open comments are *being methodically closed out*. *Environmental chamber testing of LRV 101 began on June 22, 2020, and the initial reports indicate acceptable results.*

Shipment of the first vehicle to the project site is dependent on readiness of onsite storage space, such as the test track, and available traction power, and is currently anticipated to occur in October 2020. CAF and PLTP are currently preparing the Field Test procedures and submitting them to MTA for review. MTA has returned numerous comments on the Field Test procedures to date; these comments are undergoing CAF/PLTP reconciliation and resolution.

Additional information on the status of vehicles is included as Appendix 9 of this report and is updated on a quarterly basis.

PROJECT RISK

MTA has established a risk management organization, which is defined in the RCMP, and which is overseen by MTA's Risk Management Committee. Two major elements of the RCMP are the periodic performance of quantitative risk assessments, and the maintenance and use of the Risk Register.

During the approximately one-year period of time during which the ROD had been vacated by the federal judge in his decision related to the Friends of the Capital Crescent Trail lawsuit, MTA did not conduct formal Risk Management Committee meetings, conduct quantitative risk assessments, or perform formal updates of the Risk Register. However, the Purple Line project management team did assess and respond to the risks associated with the unforeseen chain of events related to the lawsuit.

The project team resumed formal risk management meetings in October 2017, including individual updates of each risk on the current Risk Register by the risk owner. An overall update of the Risk Register was completed in draft form in January 2018 and was updated further and reissued in March 2018. Updating of the Risk Register is currently an ongoing process throughout the project's duration, and MTA is performing updates of the Risk Register periodically, though somewhat less frequently than bimonthly as established in its RCMP. The current status of the RCMP is discussed in the Project Management Plan and Sub-plans section of this report.

In January 2020, the Purple Line project team commenced activities to conduct an updated quantitative risk assessment in conjunction with potential changes in the project cost estimate and schedule anticipated as a result of the ongoing FFGA delay negotiations with PLTP. The Risk Register underwent a major update and fed into the updated quantitative risk assessment. Confirmation and finalization of the Risk Register, the quantitative risk assessment, and an update of the RCMP are pending the final settlement of the details of the FFGA delay from the ongoing MTA/PLTP negotiations.

MTA provides copies of significant updates of the Risk Register to FTA and the PMOC. The top risks from the project's latest issued update of the Risk Register and PMOC-assessed risks are discussed at the PMOC monitoring meetings with the project team and are included as Appendix 2 of this report and updated on a quarterly basis.

ACTION ITEMS

Action Items are identified at MTA/FTA Quarterly Progress Meetings, at MTA/PMOC Monthly Progress Meetings, and at MTA/FTA Biweekly New Starts Progress Conference Calls. Separate lists of Action Items for each meeting are included. Items identified as closed are removed from the subsequent monthly report. There are currently no open Action Items related to the project.

APPENDICES

The following Appendices or placeholders are provided with this report:

- Appendix 1 Safety and Security Checklist
Per OP 25, this item is issued quarterly.
- Appendix 2 Top Project Risks
Per OP 25, this item is issued quarterly.
- Appendix 3 Roadmap to Revenue Operations
Per OP 25, this item is issued quarterly "as a separate attachment."
- Appendix 4 Project Map
- Appendix 5 Acronyms
- Appendix 6 Cost vs. Budget
- Appendix 7 FTA SCC Workbook – BUILD Main Worksheet
- Appendix 8 Project Schedule
- Appendix 9 Vehicle Status Report
Per OP 25, this item is issued quarterly.
- Appendix 10 Construction Photographs

APPENDIX 1 – SAFETY AND SECURITY CHECKLIST

Note: References to SSPP, SSP, and 49CFR Part 659 as they are contained in the FTA standard checklist form have been retained in the following update. However, it is recognized that MTA is transitioning to the PTASP and 49CFR Parts 673 and 674.

(Updated July 2020)

Project Overview		National Capital Purple Line Light Rail Transit Project	
Project mode (Rail, Bus, BRT, multimode)		Rail	
Project phase (Project Development, Construction, or Start-up)		Construction	
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGG, etc)		Public Private Partnership (P3)	
Project Plans	Version	Review By FTA	Status
Safety and Security Management Plan	Version 10 dated January 29, 2020	Y	PL submitted Version 10 dated January 29, 2020 to FTA/PMOC on January 31, 2020 to address comments from the PMOC and SSOA reviews of Version 8. SSOA comments on Version 10 are being incorporated into Version 11. PLTC's SSMP Rev D was approved by MTA on November 27, 2016.
Safety and Security Certification Plan	Version 4, January 29, 2020	Y	PL submitted Version 4 dated January 29, 2020 to the PMOC on January 31, 2020. SSOA comments on Version 4 are currently in resolution. PLTC's supporting contractor-level SSCP Rev. 1 was approved by MTA in April 2019.
System Safety Program Plan (SSPP)	Reviewed annually and revised as required	2019 SSPP signed 7/15/19	MTA will be transitioning to the PTASP per 49CFR Part 673 during 2020. The existing MTA SSPP will be in effect until the transition. The PTASP will be revised to incorporate the Purple Line during the late Construction and Testing and Start-Up Phases. Internal Safety Review Audit performed August 2019 on elements 8, 9, & 10 by the Office of Safety Management and Risk Control.
System Security Plan (SSP) or Security and Emergency Preparedness Plan (SEPP)	Reviewed annually and revised as required	2019 SSEPP Signed January 2019	The existing MTA SSP will be revised to incorporate the Purple Line during the late Construction and Testing and Start-Up Phases.
Construction Safety and Security Plan	-	-	PLTC's Site Security Plan was accepted by MTA on November 9, 2016. PLTC's Health & Safety Plan was accepted by MTA on November 9, 2016.

Safety and Security Authority	Y/N	Notes/Status
Is the grantee subject to 49 CFR Part 659 state safety oversight requirements?	Y	
Has the State designated an oversight agency as per Part 659.9	Y	MDOT Rail Safety Oversight Agency (RSOA)
Has the oversight agency reviewed and approved the Project Sponsor's Security Plan or SSPP as per 49 CFR Part 659.17?	Y	RSOA oversees MTA's SSPP and SSP in compliance with 49 CFR Part 659/49CFR Part 674
Did the oversight agency participate in the last Quarterly Program Review Meeting (QPRM)?	Y	The oversight agency typically attends the QPRM.
Has the grantee submitted its safety certification plan to the oversight agency?	-	The final Safety Certification Plan will be submitted in accordance with MTA's SSPP.
Has the grantee implemented security directives issues by the Department Homeland Security (DHS), Transportation Security Administration (TSA)?	Y	MTA has, and will continue to, implement DHS/TSA Directives as indicated in SSMP Section 11.

SSMP Monitoring	Y/N	Notes/Status
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	Y	
Grantee reviews the SSMP and related project plans to determine if updates are necessary?	Y	Specified in SSMP
Does the grantee implement a process through which the Safety Manager and Security Manager are integrated into the overall project management team? Please specify.	Y	Specified in SSMP; the Safety Manager and Security Managers participate in project meetings and are involved in the project.
Does the grantee maintain a regularly scheduled report on the status of safety and security activities?	Y	Safety and Security activities are regularly reported in the monthly progress report.
Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	Y	Specified in SSMP
Does the grantee update the safety and security responsibility matrix/organizational chart as necessary?	Y	Specified in SSMP.
Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?	Y	Specified in the SSMP; evaluating need for future resources.
Has the grantee developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	Y	Specified in SSMP.
Does the grantee implement regularly scheduled meetings to track to resolution of any identified hazards and/or vulnerabilities?	Y	Specified in SSMP.
Does the grantee monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	Specified in SSMP.
Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	Y	Specified in SSMP. PHA is complete and signed by all parties. TVA is complete and signed by all parties.

SSMP Monitoring	Y/N	Notes/Status
Has the grantee ensured the development of safety design criteria?	Y	Specified in SSMP. MTA developed criteria are in the Design Criteria Manual Version 3 that was issued in September 2014. Revision C of the PLTC safety and security criteria is in comment resolution.
Has the grantee ensured the development of security design criteria?	Y	Specified in SSMP. MTA developed criteria are in the Design Criteria Manual Version 3 that was issued in September 2014. Specific draft safety and security criteria have been submitted by PLTP for review and comment.
Has the grantee ensured conformance with safety and security requirements in design?	Y	Specified in SSMP. P3 Concessionaire is developing the Design Conformance Checklists in its engineering phase. Ninety-two Design Criteria Conformance Checklist (DCCC) have been submitted to date.
Has the grantee verified conformance with safety and security requirements in equipment and materials procurement?	-	Procurement documentation such as product data sheets and product cut sheets have been reviewed. These items are submitted to the Document Control System for multi-disciplinary review.
Has the grantee verified construction specification conformance?	N	P3 Concessionaire is developing the Construction Specification Conformance Checklists as the project advances. Construction Specification Conformance Checklists have not yet been submitted.
Has the grantee identified safety and security critical tests to be performed prior to passenger operations?	Y	P3 Concessionaire has begun to identify safety and security critical tests in its Project Test Program Plan.
Has the grantee verified conformance with safety and security requirements during testing, inspection and start-up phases?	N	P3 Concessionaire will verify conformance in its Testing and Start-Up Phase activity. Factory Acceptance Testing and qualification test plans have been submitted for review and comment.
Does the grantee evaluate change orders, design waivers, or test variances for potential hazards and /or vulnerabilities?	Y	Specified in SSMP.
Has the grantee ensured the performance of safety and security analyses for proposed work-arounds?	-	Specified in SSMP; these activities will not begin until Testing and Start-Up
Has the grantee demonstrated through meetings or other methods, the integration of safety and security in the following? <ul style="list-style-type: none"> • Activation Plan and Procedures • Integrated Test Plan and Procedures • Operations and Maintenance Plan • Emergency Operations Plan 	-	Specified in SSMP; these activities will not begin until late Construction and Testing and Start-Up Phases
Has the grantee issued final safety and security certification?	-	Specified in SSMP; this activity will not begin until end of Testing and Start-Up Phase
Has the grantee issued the final safety and security verification report?	-	Specified in SSMP; these activities will not begin until end of Testing and Start-Up Phase

Construction Safety	Y/N	Notes/Status
Does the grantee have a documented /implemented Contractor Safety Program with which it expects contractors to comply?	Y	Specified in SSMP; P3 Concessionaire has developed a Safety and Health Plan. P3 contract requires compliance with MTA's Contractor Health and Safety Plan Guidelines.
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	Y	P3 Concessionaire main Joint Venture partner, Fluor, has company-wide safety and security plans.
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	Concessionaire has developed a System Safety Plan and a Concessionaire Security Plan (TP Book2A Section 8.4). MTA has approved both plans.
Provide the grantee's OSHA statistics compared to the national average for the same type of work?	Y	Through <i>June 2020</i> : <ul style="list-style-type: none"> Recordable Rate: 0.56 DART Rate: 0.38 DART (lost workday): 0.17
If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	N/A	Performance is favorable.
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	This will be a construction phase activity. Grantee has hired oversight personnel who are conducting the construction safety oversight.

Federal Railroad Administration	Y/N	Notes/Status
If shared track: has grantee submitted its waiver request application to Federal Railroad Administration (FRA)? (Please identify specific regulations for which waivers are being requested)	N/A	There is no shared track.
If shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	Y	Future FRA coordination may be required if a currently unused freight ROW is reactivated.
Is the Collision Hazard Analysis underway?	N	If required, will be responsibility of new freight operator.
Other FRA required Hazard Analysis – Fencing, etc.?	-	Future FRA coordination may be required if a currently unused freight ROW is reactivated.
Does the project have Quiet Zones?	N	
Does FRA attend the Quarterly Review Meetings?	N	

APPENDIX 2 – TOP PROJECT RISKS

As documented in the most recent update (Draft, Revision 4) of the Purple Line Risk Register, the following are the Purple Line cost and schedule risks that are rated “Significant”, “High”, or “Medium”.

Significant

- If Concessionaire is unable to utilize select backfill, then additional rock may need to be acquired

High

- PLTP poor performance, non-performance, shortage of personnel for which MTA grants time extension

Medium

- Lack of utility information and/ or incorrect information could lead to additional costs and schedule delay.
- PLTP underestimates the magnitude/value of the work due to incorrect assumptions, misinterpretation of the TP’s and/or Agreement, thus formally seeking relief of work requirements or lowering quality standards and build to those lower standards without MTA approval; or b), embarks on a campaign of claims to recoup losses or increase revenue.
- Changes to existing environmental requirements (change in law) or the application of those requirements during the construction of the Project (before operations) may change over the program’s horizon and may become more restrictive thus causing delay and additional costs
- Injunction of Permits or Temporary Restraining Order (TRO)
- As the design progresses, PLTP continues to identify additional ROW which could lead to schedule delays and costs
- The MTA is meeting regularly with the third-party stakeholders and final agreements are in place with each. There is provision of the final agreement that are different from what information was provided during the solicitation process (“the setting date”), this could lead to additional costs and schedule delays.
- If PLTP continues to “non-conforming” then this may result in lower quality requiring rework, resulting in a construction schedule delay

In addition to the top risk items in the Purple Line Project Risk Register noted above, the following risk items were also discussed at the Purple Line PMOC project review meetings:

- MTA is managing the project based on a working schedule update of the master project schedule. The update is based on the current negotiations of the P3 contract schedule,

which have been ongoing with PLTP since late 2017, but the update is not based on a mutually agreed upon P3 contract schedule. As a result, project management decisions are not fully informed until an acceptable recovery schedule is finalized with the P3 Concessionaire.

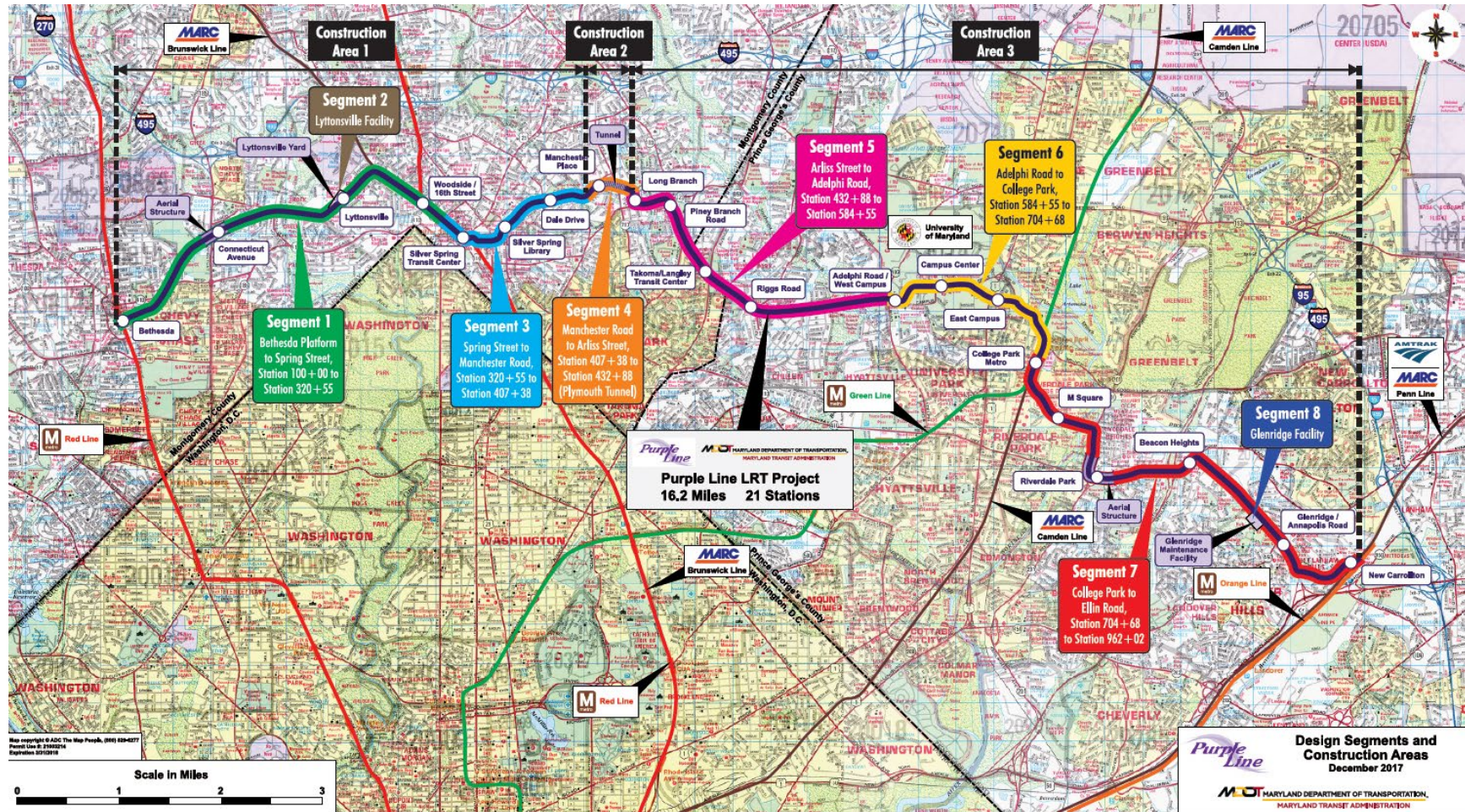
- Achievement of a recovery schedule that is agreeable to both MTA and the P3 Concessionaire under the P3 contract is anticipated to consume all the current schedule contingency and to slip the project completion date beyond the current FFGA Revenue Service Date.
- Achievement of a recovery schedule that is agreeable to both MTA and the P3 Concessionaire under the P3 contract is anticipated to result in additional project costs, likely to exceed the project cost reflected in the FFGA.
- As a result, a Recovery Plan in accordance with the terms of the FFGA is anticipated to be required; MTA has started to prepare the portions of a draft Recovery Plan for which information is currently available while negotiated details of a settlement continue to be finalized.

APPENDIX 3 - ROADMAP TO REVENUE OPERATIONS

In accordance with OP25, the Roadmap to Revenue Operations, prepared from the Project Sponsor's Master Schedule, is issued quarterly as a separate electronic file. Since the Project Sponsor's Master Schedule is undergoing a major revision for schedule recovery, the dates currently shown on this issue of the roadmap are likely to change.

Per OP25, this item is issued quarterly "as a separate attachment".

APPENDIX 4 – PROJECT MAP



APPENDIX 5 – LIST OF ACRONYMS

ADA	Americans with Disabilities Act
ATC	Alternate Technical Concept
BET	Bethesda Enclosed Trainway
BFMP	Bus Fleet Management Plan
BPW	Board of Public Works
CAF	Construcciones y Auxiliar de Ferrocarriles
CCQP	Concessionaire Construction Quality Plan
CDQP	Concessionaire Design Quality Plan
CEL	Certified Elements List
CFR	Code of Federal Regulations
CIL	Certified Items List
CQP	Concessionaire Quality Program
CSCC	Construction Specification Conformance Checklist
CSX	CSX Corporation
CY	Calendar Year
DART	Days Away, Restricted or Transferred
D-B	Design-Build
DBFOM	Design/Build/Finance/Operate/Maintain
DCCC	Design Criteria Conformance Checklist
DNR	Maryland Department of Natural Resources
EAC	Estimate at Completion
EIS	Environmental Impact Statement
EMI	Electro-magnetic Interference
E&S	Erosion and Sedimentation
FCP	Forest Conservation Plan
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
GEC	General Engineering Consultant
HVAC	Heating, Ventilation, and Air Conditioning
LOD	Limits of Disturbance

LRT	Light Rail Transit
LRV	Light Rail Vehicle
MAC	Maryland Accessibility Code
MDE	Maryland Department of the Environment
MDOT	Maryland Department of Transportation
MOU	Memorandum of Understanding
MEP	Mechanical, Electrical, and Plumbing
MTA	Maryland Transit Administration
NEPA	National Environmental Policy Act
NPS	National Park Service
NTP	Notice to Proceed
OCS	Overhead Contact System
OMF	Operation and Maintenance Facility
OP	Oversight Procedure
OSHA	Occupational Health and Safety Administration
P3	Public-Private Partnership
PD	Project Development
PEPCO	Potomac Electric Power Company
PHA	Preliminary Hazards Analysis
PLTC	Purple Line Transit Constructors
PLTP	Purple Line Transit Partners
PMC	Project Management Consultant
PMOC	Project Management Oversight Contractor
PMP	Project Management Plan
QA/QC	Quality Assurance/Quality Control
QAP	Quality Assurance Plan
QOAR	Quality Oversight Assessment Report
RAMP	Real Estate Acquisition Management Plan
RCMP	Risk and Contingency Management Plan
RFMP	Rail Fleet Management Plan
RFC	Released for Construction

RFP	Request for Proposals
ROD	Record of Decision
ROE	Right of Entry
ROW	Right-of-Way
RSD	Revenue Service Date
SCC	Standard Cost Category
SEIS	Supplemental Environmental Impact Statement
SSCC	Safety and Security Certification Committee
SSCP	Safety and Security Certification Plan
SSMP	Safety and Security Management Plan
SSOA	State Safety Oversight Agency
SSTC	Silver Spring Transit Center
SWM	Stormwater Management
SSWG	Safety and Security Working Group
TDD	Transit Development and Delivery
TPSS	Traction Power Substation
TVA	Threat and Vulnerability Assessment
UMD	University of Maryland
USACE	United States Army Corps of Engineers
WMATA	Washington Metropolitan Area Transit Authority
WSSC	Washington Suburban Sanitary Commission

APPENDIX 6 – COST VS. BUDGET

The following are project budgets, actual expenditures and forecast at completion amounts through *June 30, 2020 for MTA costs and May 31, 2020 for PLTP costs*, compared with the project budget as reported in MTA’s June 1, 2016 SCC Workbook and MTA’s current Working Budget.

(in \$1,000)

SCC	Cost Category	Budget (June 1, 2016 SCC Workbook)	Working Budget* (Jan. 1, 2017 SCC Workbook)	Expended	Forecast at Completion
10	Guideway and Track	280,620,726	258,782,885	\$132,596,787	\$259,082,885
20	Stations	114,857,016	116,127,445	\$10,506,973	\$116,127,445
30	Maintenance Facility	94,155,591	94,155,591	\$65,140,166	\$94,155,591
40	Sitework	521,968,990	315,482,782	\$180,114,630	\$348,080,489
50	Systems	263,887,313	263,887,313	\$51,495,073	\$263,887,313
	Subtotal 10 thru 50	1,275,489,636	1,048,436,017	\$439,853,630	\$1,081,333,725
60	Right-of-Way	229,600,000	229,600,000	\$250,232,343	\$250,232,343
70	Vehicles	212,940,927	212,940,927	\$37,573,110	\$212,940,927
80	Professional Services (total)	571,658,114	798,711,733	\$668,740,561	\$824,925,095
80.01	Project Development (PD)	87,149,878	87,149,878	\$85,469,312	\$85,469,312
80.02	Engineering	139,766,036	114,618,846	\$111,569,012	\$118,543,237
80.03	Project Management for Design and Construction	148,555,323	227,047,206	\$222,145,470	\$286,606,320
80.04	Construction Administration & Management	83,269,280	255,349,776	\$175,936,434	\$204,769,341
80.05	Professional Liability; other Non-Construction Insurance	34,534,796	34,534,796	\$34,316,417	\$34,534,796
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	5,805,117	10,205,293	\$22,288,687	\$25,196,151
80.07	Surveys, Testing, Investigation, Inspection	15,164,346	16,798,570	\$13,693,310	\$16,798,570
80.08	Start up	57,413,338	53,007,367	\$3,321,920	\$53,007,367
	Subtotal 10 - 80	2,289,688,678	2,289,688,678	\$1,396,399,643	\$2,369,432,090
90	Contingency	90,535,748	90,535,748	\$0	\$10,792,334
100	Finance Charges	26,805,863	26,805,863	\$0	\$26,805,863
	Total	2,407,030,288	2,407,030,288	\$1,396,399,643	\$2,407,030,286

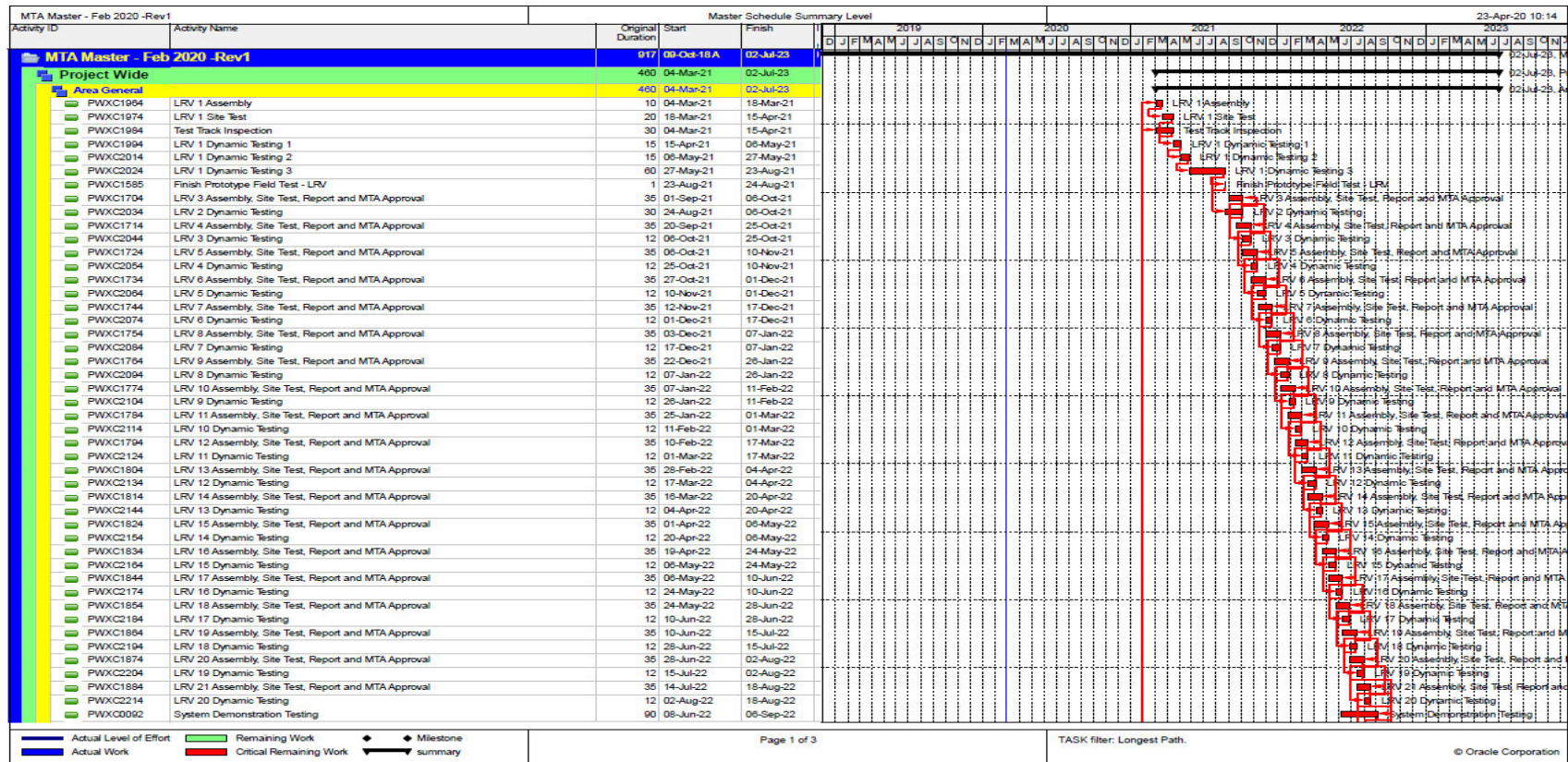
* NOTE: The Purple Line Working Budget is based on the current approved (December 2016) cost and resource loaded Baseline Project Schedule, which is undergoing mitigation and revision. Once the project schedule is re-baselined, the budget can be accordingly updated.

APPENDIX 7 – FTA SCC WORKBOOK – BUILD MAIN, JUNE 1, 2016 UPDATE

MAIN WORKSHEET - BUILD ALTERNATIVE									0
Maryland Transit Administration							Today's Date		5/24/16
Maryland National Capital Purple Line							Yr of Base Year \$		2016
FFGA Application							Yr of Revenue Ops		2022
	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars TOTAL (X000)	Base Year Dollars Unit Cost (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	YOE Dollars Total (X000)	
10 GUIDEWAY & TRACK ELEMENTS (route miles)	16.20	259,766	0.00	259,766	\$16,035	22%	12%	280,621	
10.01 Guideway At-grade exclusive right-of-way	3.26	2,978		2,978	\$913			3,244	
10.02 Guideway At-grade semi-exclusive (allows cross-traffic)	9.67	12,497		12,497	\$1,292			13,205	
10.03 Guideway At-grade in mixed traffic	1.20	12,862		12,862	\$10,718			13,961	
10.04 Guideway Aerial structure	0.46	67,018		67,018	\$145,692			73,222	
10.05 Guideway Built-up fill	0.00	0		0				0	
10.06 Guideway Underground cut & cover	0.00	0		0	\$0			0	
10.07 Guideway Underground tunnel	0.36	58,344		58,344	\$162,068			62,735	
10.08 Guideway Retained cut or fill	1.25	20,805		20,805	\$16,644			22,693	
10.09 Track Direct fixation		6,948		6,948				7,570	
10.10 Track Embedded		29,159		29,159				30,811	
10.11 Track Ballasted		30,012		30,012				32,575	
10.12 Track Special (switches, turnouts)		19,141		19,141				20,606	
10.13 Track Vibration and noise dampening		0		0				0	
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	21	103,521	0	103,521	\$4,930	9%	5%	114,857	
20.01 At-grade station, stop, shelter, mall, terminal, platform	16	23,884		23,884	\$1,493			26,295	
20.02 Aerial station, stop, shelter, mall, terminal, platform	3	45,703		45,703	\$15,234			51,031	
20.03 Underground station, stop, shelter, mall, terminal, platform	2	30,698		30,698	\$15,349			33,933	
20.04 Other stations, landings, terminals Intermodal, ferry, trolley, etc.	0	0		0				0	
20.05 Joint development		0		0				0	
20.06 Automobile parking multi-story structure		0		0				0	
20.07 Elevators, escalators		3,236		3,236				3,599	
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	16.20	87,590	0	87,590	\$5,407	7%	4%	94,156	
30.01 Administration Building Office, sales, storage, revenue counting		29,571		29,571				31,894	
30.02 Light Maintenance Facility		951		951				1,062	
30.03 Heavy Maintenance Facility		44,357		44,357				47,842	
30.04 Storage or Maintenance of Way Building		0		0				0	
30.05 Yard and Yard Track		12,710		12,710				13,358	
40 SITEWORK & SPECIAL CONDITIONS	16.20	481,579	2,405	483,984	\$29,876	41%	22%	521,969	
40.01 Demolition, Clearing, Earthwork		45,651		45,651				48,789	
40.02 Site Utilities, Utility Relocation		143,356	1,596	144,952				154,044	
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		17,099		17,099				18,439	
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		24,936	808	25,744				27,716	
40.05 Site structures including retaining walls, sound walls		64,172		64,172				70,248	
40.06 Pedestrian / bike access and accommodation, landscaping		22,662		22,662				24,399	
40.07 Automobile, bus, van accessways including roads, parking lots		135,633		135,633				148,189	
40.08 Temporary Facilities and other indirect costs during construction		28,072		28,072				30,145	
50 SYSTEMS	16.20	225,424	10,376	235,800	\$14,556	20%	11%	263,887	
50.01 Train control and signals		53,515		53,515				60,164	
50.02 Traffic signals and crossing protection		32,772		32,772				36,580	
50.03 Traction power supply substations		29,992		29,992				32,849	
50.04 Traction power distribution catenary and third rail		42,788		42,788				47,710	
50.05 Communications		33,620		33,620				37,775	
50.06 Fare collection system and equipment		2,918	10,376	13,294				15,568	
50.07 Central Control		29,819		29,819				33,240	
Construction Subtotal (10 - 50)	16.20	1,157,880	12,781	1,170,661	\$72,263	100%	52%	1,275,490	
60 ROW, LAND, EXISTING IMPROVEMENTS	16.20	186,092	37,187	223,279	\$13,783		10%	229,600	
60.01 Purchase or lease of real estate		166,132	32,483	198,615				203,143	
60.02 Relocation of existing households and businesses		19,959	4,704	24,664				26,457	
70 VEHICLES (number)	25	192,691	0	192,691	\$7,708		9%	212,941	
70.01 Light Rail	25	186,771		186,771	\$7,471			206,351	
70.02 Heavy Rail	0			0				0	
70.03 Commuter Rail	0			0				0	
70.04 Bus	0			0				0	
70.05 Other	0	5,920		5,920				6,590	
70.06 Non-revenue vehicles	0			0				0	
70.07 Spare parts	0			0				0	
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	16.20	535,369	6,032	541,401	\$33,420	46%	24%	571,658	
80.01 Project Development		87,150		87,150				87,150	
80.02 Engineering		136,688		136,688				139,766	
80.03 Project Management for Design and Construction		131,594	5,872	137,466				148,555	
80.04 Construction Administration & Management		76,410		76,410				83,269	
80.05 Professional Liability and other Non-Construction Insurance		32,697		32,697				34,535	
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		5,530	88	5,618				5,805	
80.07 Surveys, Testing, Investigation, Inspection		14,214	73	14,287				15,164	
80.08 Start up		51,086		51,086				57,413	
Subtotal (10 - 80)	16.20	2,072,032	56,000	2,128,032	\$131,360		95%	2,289,689	
90 UNALLOCATED CONTINGENCY				81,652			4%	90,536	
Subtotal (10 - 90)	16.20			2,209,684	\$136,400		99%	2,380,224	
100 FINANCE CHARGES				24,128			1%	26,806	
Total Project Cost (10 - 100)	16.20			2,233,812	\$137,890		100%	2,407,030	
Allocated Contingency as % of Base Yr Dollars w/o Contingency				2.70%					
Unallocated Contingency as % of Base Yr Dollars w/o Contingency				3.94%					
Total Contingency as % of Base Yr Dollars w/o Contingency				6.64%					
Unallocated Contingency as % of Subtotal (10 - 80)				3.84%					
YOE Construction Cost per Mile (X000)								\$78,734	
YOE Total Project Cost per Mile Not Including Vehicles (X000)								\$135,438	
YOE Total Project Cost per Mile (X000)								\$148,582	

APPENDIX 8 – PROJECT SCHEDULE

The following is the Purple Line project Critical Path (Longest Path) Schedule, based on MTA’s preliminary updated Integrated Master Project Schedule progressed through February 29, 2020, but for which final agreement with the P3 Concessionaire has not yet been reached. As noted in the body of the report, the schedule as reflected here will likely be superseded by the most recent fully resource loaded phased schedule, currently still under negotiation with PLTP, once it is approved by MTA. The February 29, 2020 update is the most recent issued by MTA.



APPENDIX 9 – VEHICLE STATUS REPORT

Purple Line Project Light Rail Vehicles

Vendor:	Construcciones y Auxiliar de Ferrocarriles (CAF)
Model:	Multiple-section 136-foot articulated vehicle, used in single-car consist (vehicle total length is 142 feet coupler-to-coupler)
Year:	First vehicle delivery is currently scheduled for late fall 2020, once storage and testing facilities are sufficiently construction complete
Quantity:	25
Identification:	The LRVs will be numbered from 101 through 126
New Technologies:	None planned (all major suppliers have service proven equipment)

Upcoming Significant Events:

- *Complete* Environmental Chamber test reports and *perform Lubrication System tests* on Vehicle 101. *Continue* static testing and low-speed dynamic testing on the test track in Elmira, NY.
- Continued Vehicle 102 static testing and commence low-speed dynamic testing in Elmira, NY. *Perform propulsion, doors, and TCMS tests.*
- Continue final assembly of the third through ninth vehicles in Elmira, NY
- Ship the currently completed six carshells in Spain to Elmira, NY for final assembly
- Continue to manufacture carshells for additional vehicles in Spain and ship them to the US for final assembly
- Continue submitting/reviewing Factory Test Procedures and Field Test Procedures

Bus Vehicle Testing: Not Applicable

APPENDIX 10 – CONSTRUCTION PHOTOGRAPHS



East Cut & Cover Safety Walkway – Arliss Street

(photo: MTA)



Area D Bay 2 Lighting Installation – Glenridge OMF

(photo MTA)