

Sixth Bimonthly Purple Line Construction Status Report
(2022 JCR, p. 78)

A Report to the Maryland General Assembly
Senate Budget and Taxation Committee
and
House Appropriations Committee

May 2023

Maryland Department of Transportation
Maryland Transit Administration

Introduction

The Maryland Department of Transportation (MDOT) prepared this supplemental report in response to language contained in the 2022 Joint Chairmen's Report (JCR). The language states:

Further provided that \$100,000 of this appropriation made for the purpose of agency administration may not be expended until the Maryland Transit Administration submits five bimonthly construction status reports for the Purple Line project to the budget committees.

The status reports shall provide:

- 1) the percent completion for the project as a whole and for each major category of work;*
- 2) the running total amount expended for construction; and*
- 3) an explanation of any material change to the total construction cost estimate or construction schedule as set forth in the revised P3 Agreement as amended to add Maryland Transit Solutions as the replacement design-build contractor for the project.*

The first status report shall be submitted by July 1, 2022, and subsequent reports shall be submitted every second month thereafter, and the budget committees shall have 45 days from the date of the receipt of the final report to review and comment. Funds restricted pending the receipt of a report may not be transferred by budget amendment or otherwise to any other purpose and shall be canceled if the report is not submitted to the budget committees.

This sixth status report, not required in response to the 2022 JCR, is being submitted in the interest of continued transparency for the Committees.

The Purple Line is a critical investment in Maryland's transportation system that will provide reliable east-west travel in Montgomery and Prince George's counties, help reduce congestion, improve our environment, increase transit connectivity, create jobs, and drive economic growth.

The Purple Line will transform the region by:

- advancing the shared mission to improve the quality of life and economic vitality in our communities by creating and sustaining an integrated, convenient, and reliable transportation network;
- creating several new multimodal connections across the region, linking to five Washington Metropolitan Area Transit Authority (WMATA) Metro lines, three Maryland Area Regional Commuter (MARC) commuter rail lines, Amtrak, and a host of bus services;
- greatly expanding transit opportunities in Maryland's two most populous and fastest-growing counties in the State;
- creating convenient, dependable east-west access to jobs, educational centers, shopping, recreation, and attractions;
- supporting more than 6,000 jobs, with 26% for design services going to small and minority-owned businesses and 22% for construction going to small and minority-owned businesses;

- relieving automobile congestion on major arteries and local roads in one of the most congested areas in the nation;
- providing significant environmental benefits through the operation of clean electric energy light rail vehicles and taking thousands of vehicles off the road daily, thereby reducing vehicle emissions caused by single occupancy vehicle drivers;
- spurring economic growth along the Purple Line alignment in and between Prince George’s and Montgomery Counties and having a positive impact on property values by improving access and mobility; and
- revitalizing communities and providing much-needed opportunities for transit-oriented developments, many of which are already under development in anticipation of completion of the Purple Line.

Information Requested

As requested in the 2022 Joint Chairmen’s Report (JCR), MTA is providing the most recent information collected and summarized through the end of March 2023. The Purple Line Project Team is using the updated calculations and categories from the March 2023 JCR for measuring completion. The calculations and categories are described below.

1. The percent completion for the overall project and for each major category of work.

As of March 31, 2023, the following completion percentages have been achieved:

Completion Category	% Complete (as of 3/31/23)	% Complete (as of 1/31/23)
Overall Project ⁽ⁱ⁾	51.1%	49.4%
Utility Relocations ⁽ⁱⁱ⁾	80.0%	78.1%
Civil Design ⁽ⁱⁱⁱ⁾	99.0%	96.5%
Systems Design ^(iv)	73.7%	63.2%
Construction Possession of Property Acquisitions ^(v)	99.5%	99.5%
Civil Construction ^(vi)	35.4%	29.2%
Rail Installation ^(vii)	2.2%	1.8%
Systems and Station Construction ^(viii)	5.7%	2.4%
Glenridge Operations and Maintenance Facility ^(ix)	95.0%	95.0%
Rail Vehicles Ready to Ship ^(x)	92.8%	92.8%

UPDATED CALCULATION FORMULAS:

- i. Overall Project completion is calculated by summing the earned value (EV) for the three P3 project phases (prior Design-Build Contractor, MTA interim, current Design-Build Contractor) and dividing by the sum of the estimates at completion (EAC) for the three P3 project phases.

$$(EV_{priorDB} + EV_{interim} + EV_{currentDB}) / (EAC_{priorDB} + EAC_{interim} + EAC_{currentDB})$$

- ii. Progress of Utility Relocations is now calculated using partial progress information for each individual utility relocation package. Of the 260 total utility relocations packages, the following progress is noted:
 - a. 195 packages at 100% Complete
 - b. 9 packages at $90\% \leq \text{Complete} < 100\%$
 - c. 7 packages at $50\% \leq \text{Complete} < 90\%$
 - d. 2 package $0\% < \text{Complete} < 50\%$
 - e. 47 packages at 0% Complete
- iii. Civil Design progress is based on 197 of 199 civil design packages having a Released for Construction (RFC) status; the remaining 2 civil design packages are near final completion.
- iv. Systems Design progress is based on 14 of 19 systems design packages having a Released for Construction (RFC) status. Systems designs packages are the last packages to complete, because equipment location and cable routing must fit into the completed civil design environment. The remaining 5 systems design packages are progressing towards completion, lagging as necessary to be coordinated with the remaining civil design packages. The *Fifth Bimonthly Purple Line Construction Status Report*, dated March 2023, mistakenly indicated that 17 of 19 systems design packages had an RFC status; only 12 packages had an RFC status, which corresponds to a percent completion of 63.2% as shown in this month's table.
- v. Construction Possession refers to available access for Purple Line Project construction. The category includes all original (P3A Exhibit 9) and additional (P3A Exhibit 9B) properties required for the project. One remaining additional (Exhibit 9B) property is under negotiation for construction possession.
- vi. Civil Construction is a new category calculated based on physical construction progress of major civil components (retaining walls, bridges, drainage, paving, and underground structures) across the project alignment.
- vii. Rail Installation is calculated based on physical construction progress across the project alignment.
- viii. Systems and Station Construction is a new category calculated based on physical construction progress of major systems components (overhead power, train & traffic signals, communications equipment, substations) and stations across the project alignment.
- ix. This category has been updated to measure the progress of just the maintenance facility. Civil, rail, and systems construction within the Glenridge Yard is now tracked and reported under the Civil Construction, Rail Installation, and Systems and Station Construction status.
- x. All 26 of the original fleet of 26 Light Rail Vehicles (LRVs) are ready to ship to Maryland when the Glenridge OMF is ready to receive LRVs. An additional 2 LRVs have been ordered and are under production.

2. *The running total amount expended for construction.*

Since the execution of the new design-build contract on April 15, 2022, through March 31, 2023, \$518.5 million has been expended on the design-build contract. Reported expenditures are based on the latest monthly construction progress report prepared by the Concessionaire.

3. *An explanation of any material change to the total construction cost estimate or construction schedule as set forth in the revised P3 Agreement, as amended to add Maryland Transit Solutions as the replacement design-build contractor for the project.*

There are no material changes to the construction cost estimate or construction schedule, meaning that MTA has not executed any changes to the contract that have a material impact on the cost or schedule.

The Concessionaire is required to publish monthly construction progress reports for its lenders. The report for the month ended March 31, 2023, will note that (1) Owner Utility Adjustments and Remaining Utility Adjustments have been delayed further; (2) the Concessionaire and the Design-Build Contractor have quantified this delay to be 207 days; and (3) the quantified 207-day delay is subsequent to implementation of the initial mitigation recommendations.

MTA is evaluating the updated schedule information recently provided. It is important to clarify that the delay quantified in the Concessionaire's report is based only on initial mitigation activities. At this time, there has been no change made to the Revenue Service Availability (RSA) Deadline, the date the Independent Engineer issues a certificate of Revenue Service Availability for the Project.

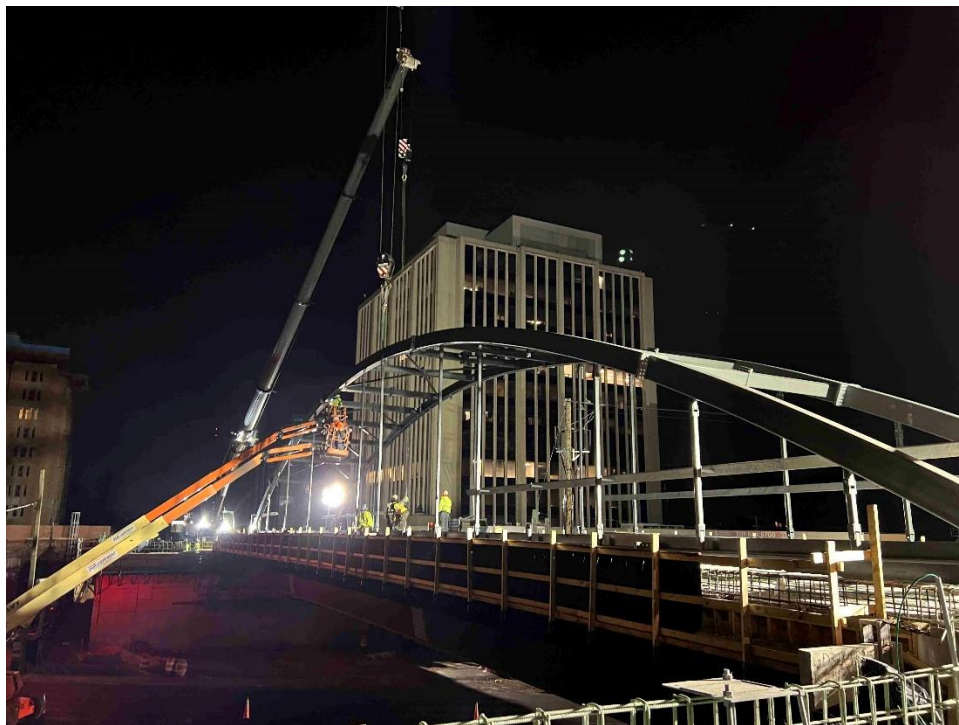
In October 2022, MTA, the Concessionaire, and the Design-Build Contractor formed a tiger team to identify and recommend potential schedule mitigation opportunities. The tiger team identified and implemented an initial set of opportunities within the schedule that created additional concurrency along the critical path. These initial opportunities relate to Maintenance of Traffic (MOT) phasing and sequencing of construction, and optimization of station platform design, that allow for civil construction to continue concurrent with the remaining utility relocation work. In February 2023, the Concessionaire submitted a proposed initial recovery schedule that incorporated the tiger team's initial recommendations, which resulted in a reduction of 137 days to the delay shown in the unmitigated schedule (dated November 2022). The Concessionaire's initial recovery schedule was accepted by MTA on March 31, 2023. The Concessionaire subsequently prepared a schedule update through March that evaluated the continuing utility relocation delays and quantified the current delay to be 207 days; as such, the Concessionaire is now working on a new recovery schedule for submittal while additional mitigation opportunities continue to be discussed. The tiger team will continue regular meetings to anticipate potential schedule impactors and identify mitigation opportunities early.

The Purple Line is a complex project being constructed in a dense, urban environment while maintaining pedestrian and vehicular access. As with any mega project, the schedule will fluctuate monthly. MTA will continue to provide regular updates to the public. The MTA team remains committed to delivering this critical transit project for the region.

Construction Progress Photos



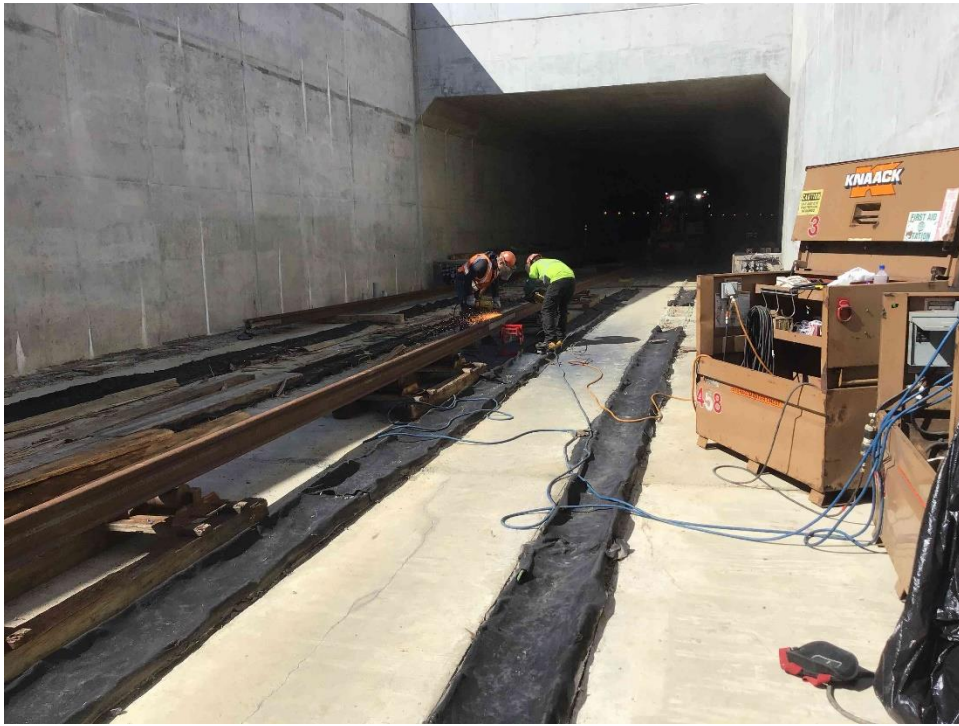
Segment 1 – Gantry Shed Installation at Bethesda Metro South Entrance (03/02/23)



Segment 2 – Structure S07 Pedestrian Bridge Truss Set-in-Place over Connecticut Ave (01/2023)



Segment 3 – Sidewalk Concrete Placed at Bradford Place Apartments (03/22/23)



Segment 4 – Embedded Track Installation at Plymouth Tunnel (03/09/23)



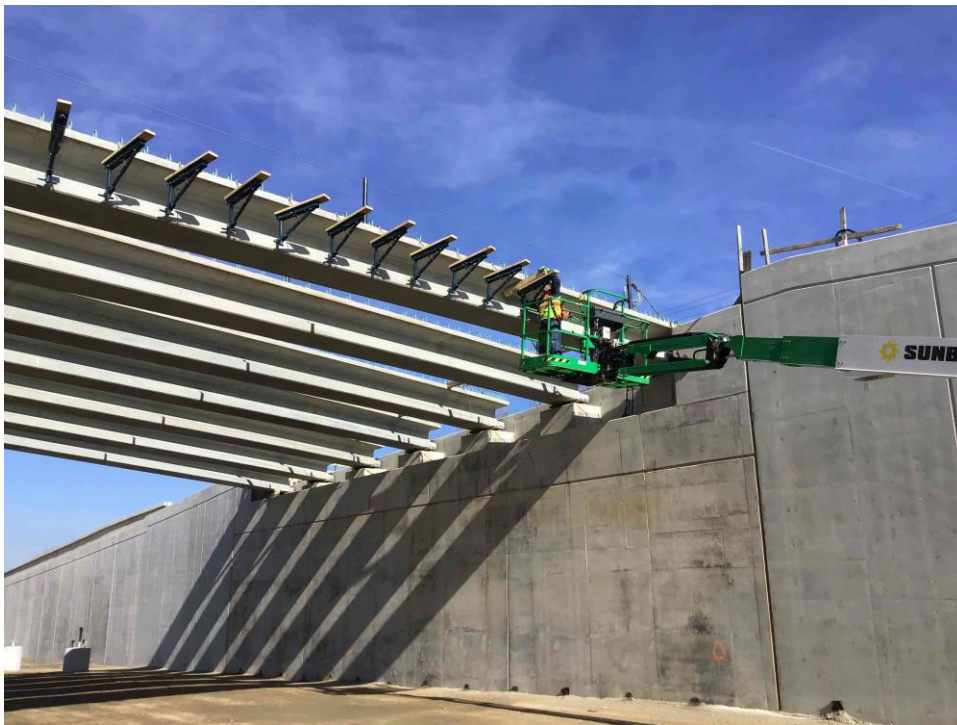
Segment 5 – Directional Bore Drilling for Fish Passage at Long Branch Culvert (03/10/23)



Segment 6 – Catenary (OCS) Foundation Drilling on UMD Campus (03/13/23)



Segment 7 – Substation TPSS-QYG Set-in-Place at Glenridge O&M Facility (03/09/23)



Segment 8 – Structure S36 Mall Access Bridge Girder Set-in-Place in Glenridge (02/08/23)