



## MEMORANDUM

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**From:** Li Li, WRA

**cc:** Scott Thompson-Graves, Mike DuRoss

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**Project:** Newport Train Station Ridership  
Forecasting

The purpose of this memorandum is to document the model methodology, scenario assumptions, and forecasting for the Newport Train Station ridership. This study provides 2040 ridership forecasting for the Newport Train Station added along the SEPTA Wilmington line between the current Wilmington and Churchmans Crossing stations. The sketch model developed for MARC/SEPTA Commuter Rail Service Extension Ridership Analysis was used for this study. It is a simplified mode split model taking the highway cost skim derived from the DeIDOT freight model and the combined trip tables and transit costs from travel demand models for Baltimore Metropolitan Council (BMC), the Metropolitan Washington Council of Governments (MWCOG), Delmarva Peninsula Model from the Delaware Department of Transportation (DeIDOT), and the Delaware Valley Regional Planning Commission (DVRPC). The transit trip tables were then aggregated to ridership for each rail stop based on walk and drive sheds. Walk access/egress trips are assumed to use the station within walkable distance and drive access trip from TAZ between 2 stations will travel to the upstream station if the additional travel time is less than the 80% of the transit time between the 2 stations. There were three build scenarios studied in the original MARC/SEPTA Commuter Rail Service Extension Ridership Analysis, and the Scenario 2 operation schedule was assumed for the Newport Ridership Forecasting Study. Scenario 2 assumed the SEPTA Wilmington line will be operated at its current schedule and the MARC Penn line will be extended to Newark. Passengers will need to transfer at Newark to go further south or north.

### New Scenarios

The Newport train station will be located on E. Water Street just east of S. James Street between Churchmans Crossing and Wilmington along the SEPTA Wilmington line. The Wilmington line will be operated at the current schedule. The Newport station will be in the same fare zone as Churchmans Crossing. A park and ride lot will be available to allow motorists to access this new station. To provide more accessibility, Bus route 9 will be extended to this location.

This study evaluated two build scenarios, scenario 2A and 2B. Both scenarios have the same transit service as described above. The difference between the two scenarios is that Scenario 2A uses the same land use as the original MARC/SEPTA Commuter Rail Service Extension Ridership Analysis, while Scenario 2B includes 1500 additional jobs created by the planned redevelopment of the former General Motors plant one mile north of Newport station. The redevelopment will create 1500 permanent onsite jobs in logistics, distribution, engineering, and transportation as well as 600 support industries and service jobs region-wide. Since there is no geographic location of the 600 support jobs, it is assumed they will be evenly distributed throughout the region.

### Model Results

For Scenario 2A, the study updated the Delmarva Peninsula Model 2040 transit service by adding the Newport station along the Wilmington line and extending Bus route 9 to the Newport station. A park and ride lot at the Newport station and the fare

from/to it were also added. The transit cost skim output from the Delmarva Peninsula model was run with the updated service and was then input into the Sketch Model which uses the current 2040 trip table and highway cost skim to generate the ridership forecasting by station for Scenario 2A.

Scenario 2B differs from Scenario 2A with the additional jobs at the previous GM Plant. The Delmarva Peninsula Model was run with the updated employment data to the TAZ where GM facility was located to get the number of trips from/to the redeveloped TAZ. Trips were then grouped into internal-internal, external-internal, and internal-external groups. Growth factors from Scenario 2A to 2B were derived for these three groups and applied to Scenario 2A zone to zone transit trips originating/destinated to this TAZ, with the assumption that the new trips created by these new jobs will follow the same distribution pattern as the current TAZ. The transit trip variation from Scenario 2A to 2B was then aggregated by station based on the walk and drive shed to get the ridership growth at each rail station.

The detailed ridership for these two scenarios with the base year and no-build scenario are shown in Table 1. In Scenario 2A, overall the Newport station will carry 550 boardings, part of which is a shift from Churchmans Crossing or Wilmington as compared with the Scenario 2 forecasting for MARC/SEPTA extension analysis. The majority of transit trips boarding at Newport are estimated to head north. Scenario 2B increases boardings at Newport by about 50. Reasonableness checks were done for Scenario 2B by comparing the transit shares at the TAZs near the Wilmington, Churchmans Crossing, and Newark stations. TAZs near the Newark and Churchmans Crossing stations show similar transit share and rail share. The transit share for these TAZs ranged from 4% to 6% and rail share ranged from 0.5% to 1.5%. TAZs near Wilmington station show a similar 0.6% rail share and 14% transit share. The higher transit share can be attributed to the more robust bus service near the station. The redeveloped TAZ in Scenario 2B shows a 6% transit share and 1.4% rail share which is in the same range as the TAZ near the Churchmans Crossing and Newark stations.

**Table 1: Boardings by Station**

MARC/SEPTA Station	Base Year	2040 No-Build (Scenario 2)	2040 Build Scenario	
			Scenario 2A	Scenario 2B
<b>Stations between Union Stations and Aberdeen</b>	23,800	33,280	33,310	33,310
Perryville	180	210	210	230
Elkton	0	200	200	200
Newark	790	1,080	1,110	1,115
Churchmans Crossing	590	550	510	515
Newport	0	0	550	600
Wilmington	1,860	1,990	1,850	1,860
Claymont	1,180	1,530	1,680	1,685
<b>Stations between Marcus Hook and University City</b>	5,800	6,400	6,400	6,420
<b>Total</b>	<b>34,200</b>	<b>45,240</b>	<b>45,820</b>	<b>45,930</b>



