

## Bethesda Purple Line Minor Master Plan Appendix – Bethesda South Entrance

### Bethesda South Entrance Project

The concept plan for the Bethesda South Entrance project includes two high-speed elevators that travel between Elm Street and the Red Line and four high-speed elevators that travel between the Purple Line and the Red Line. The alternative station design includes five high speed elevators within the Apex Building site that travel between Wisconsin Avenue and the Red Line. According to MTA, none of the elevators stop at the Purple Line level in the alternative station design because this would degrade the level of service for Red Line customers, and the constraints of the site would require passengers to cross the light rail tracks. However, this will require all passengers transferring between the Purple Line and the Red Line to first travel up to street level and then descend back into the station – an inconvenience that will create additional congestion at street level. On balance, we believe that a direct elevator connection between the Purple Line and Red Line should be retained for the following reasons:

**Level of Service for Red Line Customers:** Table 3 shows the number of boardings and alightings for the Metrorail Red Line, the Purple Line, and transfers between the Red Line and Purple Line, for both the existing Bethesda North Station (located at Wisconsin Ave and Old Georgetown Road) and the planned Bethesda South Station. According to the *Bethesda Station South Entrance Alternate Station Concept (07/23/13) Elevator Simulation Calculations* report, there will be more Red Line passengers at the South Entrance that transfer to and from the Purple Line than do not transfer to and from the Purple Line. And since the inconvenience to Red Line passengers that must go out of their way to transfer to and from the Purple Line is likely to be greater than the inconvenience to Red Line passengers who are delayed because the elevators make an additional stop, at least some of the elevators should either make an additional stop at the Purple Line station, or travel just between the Red Line station and the Purple Line station. This analysis should be confirmed by a travel time study for Red Line passengers and pedestrian level of service study.

**Pedestrian Crossings of Purple Line Tracks:** One of the benefits of light rail compared to heavy rail is that pedestrians can walk across the tracks. In fact, pedestrians are permitted to walk across the tracks at most Purple Line stations, including the Bethesda station in the concept plan. While the Bethesda station has higher passenger volumes than other stations, it is not uncommon for pedestrians to cross the tracks at other high volume stations light rail lines.

Table 3: 2030 Daily Ridership Summary

| Daily                           | Entrance | Metrorail Bethesda Station |            | Purple Line Bethesda Station |            | Transfers Between Metrorail and Purple Line |                  | Total Access Demand (excludes transfers) |            |     |        |     |
|---------------------------------|----------|----------------------------|------------|------------------------------|------------|---|------------------|--|------------|-----|--------|-----|
|                                 |          | Boardings                  | Alightings | Boardings                    | Alightings | From Metro to PL                            | From PL to Metro | Boardings                                | Alightings |     |        |     |
| South Entrance with Purple Line | North    | 8,992                      | 8,976      | 0                            | 0          | 0   | 0                | 8,992                                    | 8,976      |     |        |     |
|                                 | South    | 5,008                      | 5,524      | 4,303                        | 5,699      | 5,582                                       | 7,443            | 9,311                                    | 11,223     |     |        |     |
|                                 | Total    | 14,000                     | 14,500     | 4,303                        | 5,699      | 5,582                                       | 7,443            | 18,303                                   | 20,199     |     |        |     |
|                                 |          |                            |            |                              |            | East - Elm/Wisconsin                        | 65%              | 6,052                                    | 6,509      | 58% | 12,561 | 61% |
|                                 |          |                            |            |                              |            | West - Woodmont                             | 35%              | 3,258                                    | 4,714      | 42% | 7,973  | 39% |

Source: *Bethesda Station South Entrance Alternate Station Concept (07/23/13) Elevator Simulation Calculations*