Medical Center Station Access Improvement Study

June 16, 2009
BRAC Implementation Committee Meeting
Alternatives

1. No build
2. Deep elevators
3. Shallow tunnel
4. Deep elevators & shallow tunnel
5. Pedestrian bridge
Alternative 1: No Build
Alternative 1: No Build

Components:
- Median expansion
- Roadway widening on west side
- Addition of pick-up/drop-off on east side
- Maintenance of Traffic
Alternative 1: No Build

**What it will do**
- Enhance pedestrian safety

**What it won’t do**
- Reduce the number of people crossing the intersection at-grade
- Reduce conflicts between pedestrians and turning vehicles
Alternative 2: Deep Elevators
Alternative 2: Deep Elevators
Alternative 2: Deep Elevators

Components:

- New Mezzanine Passageway
- 3 Street to Mezzanine Elevators
- Emergency Stair Shaft
- 1 Platform to Mezzanine Elevator
- 1 Platform to Mezzanine Stair
- Median expansion
- Roadway widening on west side
- Addition of pick-up/drop-off on east side
- Maintenance of Traffic
Alternative 2: Deep Elevators

**What it will do**
- Reduce the number of pedestrians crossing at grade by 80% (Metrorail users)
- Reduce the number of conflicts between pedestrians and vehicles
- Reduce the trip time for NNMC Metrorail riders
- Reduce the delay for vehicles exiting NNMC in the PM Peak

**What it won’t do**
- Serve the bus riders or other pedestrians
Alternative 3: Shallow Tunnel
Alternative 3: Shallow Tunnel
Alternative 3: Shallow Tunnel

Components:

• Underground Shallow Tunnel (Mined)
• 4 Street to Tunnel Elevators (2 eastside & 2 westside)
• 2 Escalator/Stair Pairs
• 2 Canopies
• Addition of pick-up/drop-off on east side
• Maintenance of Traffic
Alternative 3: Shallow Tunnel

**What it will do**

- Potentially reduce all at-grade crossings
- Reduce the number of conflicts between pedestrians and vehicles
- Reduce the delay for vehicles exiting NNMC in the PM Peak
- Give pedestrians an option for crossing Rockville Pike

**What it won’t do**

- Reduce trip time for any pedestrians
Alternative 4: Deep Elevators & Shallow Tunnel
Alternative 4: Deep Elevators & Shallow Tunnel
Alternative 4: Deep Elevators & Shallow Tunnel

Components:

- New Mezzanine Passageway
- 3 Street to Mezzanine Elevators
- Emergency Stair Shaft
- 1 Platform to Mezzanine Elevator
- 1 Platform to Mezzanine Stair
- Underground Shallow Tunnel (Mined)
- 4 Street to Tunnel Elevators (2 eastside & 2 westside)
- 2 Escalator/Stair Pairs
- 2 Canopies
- Addition of pick-up/drop-off on east side
- Maintenance of Traffic
Alternative 4: Deep Elevator & Shallow Tunnel

**What it will do**
- Potentially reduce all at-grade crossings (80% Metrorail users + 20% bus patrons and other pedestrians)
- Reduce the number of conflicts between pedestrians and vehicles
- Reduce the delay for vehicles exiting NNMC in the PM Peak
- Reduce the trip time for NNMC Metrorail riders
- Give bus patrons an option for crossing Rockville Pike

**What it won’t do**
- Reduce trip time for bus patrons or other pedestrians
Alternative 5: Pedestrian Bridge
Alternative 5: Pedestrian Bridge
Alternative 5: Pedestrian Bridge

Components:
- 20’ Wide Pedestrian Bridge
- 4 Street to Bridge Elevators (2 eastside & 2 westside)
- 2 Lobby/Escalator/Stair Pair (1 eastside & 1 westside)
- Median expansion
- Roadway widening on west side
- Addition of pick-up/drop-off on east side
- Maintenance of Traffic
Alternative 5: Pedestrian Bridge

**What it will do**
- Potentially reduce all at-grade crossings
- Reduce the number of conflicts between pedestrians and vehicles
- Reduce the delay for vehicles exiting NNMC in the PM Peak
- Give pedestrians an option for crossing Rockville Pike

**What it won’t do**
- Reduce trip time for any pedestrians
## Pedestrian Crossings at Intersection

<table>
<thead>
<tr>
<th>Ridership</th>
<th>Pedestrians Crossing Intersection – AM and PM Peak Hour</th>
<th>Maximum # of People Using Shuttle (Peak Hour)</th>
<th>Estimated Pedestrians Using New Tunnel or Bridge – AM and PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>250-275</td>
<td>110*</td>
<td>N/A</td>
</tr>
<tr>
<td>2020</td>
<td>875-1000</td>
<td>240**</td>
<td>635-760</td>
</tr>
</tbody>
</table>

*Based on existing shuttle counts (46% utilization rate)

**Maximum capacity of shuttles during peak hour
## Cost Estimates

<table>
<thead>
<tr>
<th>Costs*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>0.5</td>
<td>22.6</td>
<td>23.3</td>
<td>44.0</td>
<td>10.8</td>
</tr>
<tr>
<td>Project Delivery</td>
<td>0.2</td>
<td>7.9</td>
<td>8.2</td>
<td>15.4</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0.7</strong></td>
<td><strong>30.5</strong></td>
<td><strong>31.5</strong></td>
<td><strong>59.4</strong></td>
<td><strong>14.6</strong></td>
</tr>
</tbody>
</table>

*Previous Total* | 1-1.5 | 32-35 | 16-29 | 47-60 | 12-15 |

*Cost estimates are in FY09, $ Millions.*

Note: Range of accuracy at this level of conceptual planning is -10% to +30%.
Next Steps

- Final report
- Committee recommendation
- Secure Funding
  - Assist Navy in obtaining DAR certification