Tier 2 Alternatives Evaluation

<table>
<thead>
<tr>
<th>Tier 2 Alternative Summaries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Alternative 1</td>
</tr>
<tr>
<td>Meets Peak Demand: Yes</td>
</tr>
<tr>
<td>Capital Cost: $739 million</td>
</tr>
<tr>
<td>O&amp;M Costs: $2.88 million</td>
</tr>
<tr>
<td>1 way trip time: 7 minutes</td>
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<tr>
<td>Impact: Major impact to Overtown</td>
</tr>
<tr>
<td>Recommended for Further Consideration</td>
</tr>
<tr>
<td>Alternative 2</td>
</tr>
<tr>
<td>Meets Peak Demand: Yes</td>
</tr>
<tr>
<td>Capital Cost: $498.8 million</td>
</tr>
<tr>
<td>O&amp;M Costs: $2.2 million</td>
</tr>
<tr>
<td>1 way trip time: 10 minutes</td>
</tr>
<tr>
<td>Impact: None</td>
</tr>
<tr>
<td>Alternative 3</td>
</tr>
<tr>
<td>Meets Peak Demand: No</td>
</tr>
<tr>
<td>Capital Cost: $430.8 million</td>
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<tr>
<td>O&amp;M Costs: $3.98 million</td>
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<tr>
<td>1 way trip time: 25 minutes</td>
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<tr>
<td>Impact: Impacts existing Mover operations</td>
</tr>
<tr>
<td>Alternative 4</td>
</tr>
<tr>
<td>Meets Peak Demand: Yes</td>
</tr>
<tr>
<td>Capital Cost: $187 million</td>
</tr>
<tr>
<td>O&amp;M Costs: $2.8 million</td>
</tr>
<tr>
<td>1 way trip time: 8 minutes</td>
</tr>
<tr>
<td>Impact: Minor impact to traffic</td>
</tr>
</tbody>
</table>

The final recommended alternatives for further study are the Metromover Shuttle and the Light Rail Shuttle.

Implementation Plan and Schedule

- Project Development (PD) and NEPA completed by locals (per MAP-21)
- PD and NEPA could be completed by 2016 if funding secured
- Engineering and New Starts applications process 2017-2019
- Stations funding opportunities: CRA, Arena/Bayside, Port, City, adjacent developers
- Design/Engineering and Construction equal participation from FTA, FDOT and locals
- O & M costs should be shared by Port passengers, cruise ships and the Port
- Final design in 2021
- Construction by 2025

Purpose of Study

The purpose of this MPO study, ‘Transit Options to PortMiami Feasibility Study’, is to examine the potential for providing a transit connection between PortMiami and Downtown Miami as recommended by the most recent PortMiami 2035 Plan adopted by the Miami-Dade Board of County Commissioners. This study seeks to analyze several modes, routes, and combinations of transit to PortMiami.

In order to accommodate future growth, PortMiami is continually expanding its intermodal capabilities. The PortMiami Tunnel is currently under construction and is anticipated to be completed in 2014. This project will allow port traffic to move more efficiently to and from the expressway system. Also, through its partnership with Florida East Coast (FEC), PortMiami is augmenting its freight traffic by reinstating its rail service and developing a new rail yard facility. However, these projects only improve some elements of PortMiami’s intermodal capabilities. The transportation alternatives for cruise passengers and the growing number of Port employees continue to be limited, and the land required for additional parking is constrained. With this anticipated future growth, and with construction of the tunnel which will provide additional roadway access for freight, the opportunity to study and implement alternatives to other modes of transportation becomes a necessity. This proposed transit connection would expand PortMiami’s intermodal capabilities for cruise passengers and Port employees alike.

A new transit connection would provide opportunities such as decreased vehicular traffic to the Port; reducing emissions due to idling, and advancing the Port’s vision of attaining clean air quality in the region.
Initial Tier 1 Alternative Concepts

Commuter Rail Service to the Port - Alternative 1

A two-mile extension of the commuter rail service to the Port, using either the FDOT’s planned South Florida East Coast Corridor service or the private All Aboard Florida service, as they are developed.

**Advantages**
- Would not require additional vehicles for this operation
- The existing track and rail bridge have already been upgraded as part of an early TIGER II grant
- Only capital costs would be needed for additional track on the Port side and construction of at-grade stations
- Implementation would be simultaneous with either of the FEC projects
- The service would offer the highest capacity vehicles

**Drawbacks**
- Passengers from the Airport and Metrorail would require a transfer from the Overtown Station
- FEC would need to reconsider the design of their Downtown Central terminal to allow the train to continue on to the Port, requiring substantial maneuvering and switching to serve both facilities
- With limited headways, limited station locations and infrequent service, this option would have lower capacity as a service and may not serve the needs of cruise passengers

Metrorail Extension to the Port - Alternative 2

A 1.9-mile elevated Metrorail extension from the Historic Overtown/Lyric Theatre Metrorail Station to PortMiami using either the existing FEC corridor or the NE 6th Street corridor. This alternative will require the construction of a new station and a third level structure that will be approximately 50-ft to 60-ft above the ground. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals. Land uses consist of Vacant Nonresidential, Vacant Residential, Retail/Office, Public/Semi-Public and Institutional. The estimated annual operating and maintenance costs are estimated to be $2.2 million (2011 dollars)

**Advantages**
- The extension is shorter and will be supported by the existing Port Bridge, both of which saves on costs
- No identified impacts to wetlands or any identified adjacent historical resources

**Drawbacks**
- Even though it is grade separated, the Metromover provides the slowest trip to the Port (avg. 12mph)
- The elevated alignment will visually impact the historic Freedom Tower
- Twelve new vehicles would be needed

Metromover Outer Loop Extension from the Freedom Tower Station - Alternative 3

An extension beginning just south of the Freedom Tower Metromover Station by providing a new railway switch to provide access to PortMiami, operating off the outer loop. An elevated guideway will be positioned on the south side of NE 6th Street to prevent encroachment on the historical Freedom Tower building. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals. Land uses consist of Vacant Nonresidential, Vacant Residential, Retail/Office, Public/Semi-Public and Institutional. The estimated annual operating and maintenance costs are estimated to be $3.98 million (2011 dollars)

**Advantages**
- No identified impacts to wetlands for this alternative
- The headway on the Port Loop added to the Outer Loop with the combined 3 minute headways provided by the Omni and the Brickell Loop is not within the operating capacity of the system
- The elevated alignment will visually impact the historic Freedom Tower

Metromover Shuttle between Overtown and the Port - Alternative 2

A 1.9-mile Metromover shuttle operation from south of the Historic Overtown/Lyric Theatre Metromover Station to PortMiami utilizing the NE 6th Street corridor. This alternative will require the construction of a new station and a third level structure that will be approximately 50-ft to 60-ft above the ground. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals. Land uses consist of a new station and a third level structure that will be approximately 50-ft to 60-ft above the ground. The estimated annual operating and maintenance costs are estimated to be $2.8 million (2011 dollars)

**Advantages**
- Would not impact current Metromover or Metromover operations

**Drawbacks**
- Requires one transfer for all passengers
Tier 2 Alternative Concepts

Potential future passengers taking transit to the Port can be broken down into the categories of cruise passengers, Port employees, visitors, and other users of the Port. A variety of sources were used to determine the overall employment population at the Port, such as past economic impact studies, major employer surveys, and the PortMiami 2035 Master Plan. Employment projections combined with the forecasted growth of cruise passengers help illustrate the future demand for transit ridership to the Port. Annual passenger forecasts must be translated into daily and peak loads associated with cruise ship operations to predict service demands for transit ridership to the Port. The table below compares Tier 2 alternatives' crush loads for current operations and for 2035.

<table>
<thead>
<tr>
<th>Estimated Annual Boardings</th>
<th>Projected Employees</th>
<th>Annual Employee Boardings</th>
<th>Cruise Passengers</th>
<th>Cruise Boardings</th>
<th>Total Boardings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>7,800</td>
<td>4,643,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>9,300</td>
<td>4,807,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>16,000</td>
<td>5,441,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>20,000</td>
<td>996,800</td>
<td>5,739,000</td>
<td>700,000</td>
<td>6,986,800</td>
</tr>
<tr>
<td>2030</td>
<td>21,000</td>
<td>8,193,000</td>
<td>6,045,000</td>
<td>740,000</td>
<td>6,193,000</td>
</tr>
<tr>
<td>2035</td>
<td>23,000</td>
<td>1,477,000</td>
<td>6,361,000</td>
<td>790,000</td>
<td>2,267,000</td>
</tr>
</tbody>
</table>

Metromover Shuttle between Overtown and the Port – Alternative 1

A proposed Metromover Shuttle from the Historic Overtown/Lyric Theatre Metromover Station to PortMiami utilizing the NE 6th Street corridor. It will be elevated above the Metromover line along NE 2nd Avenue thereby requiring a 3rd level structure that will be approximately 50-ft to 60-ft above the existing ground. Land uses along the project consists of vacant non-residential, vacant residential, retail/office, public/semi-public and institutional. The estimated annual operating and maintenance costs are estimated to be $2.88 million (2011 dollars).

Advantages

- Shorter than other proposed alternatives, and will be supported by the existing Port Bridge, both of which saves on costs
- No identified impacts to wetlands or any identified adjacent historical resources

Drawbacks

- The height of the structure would create visual impacts Downtown
- Will require the construction of a new guideway across the Intracoastal Waterway, which will require extensive environmental coordination and clearance prior to construction
- The extension of the Metromover traveling through Overtown to connect to the existing storage/maintenance facility will cause a major impact to the Overtown Community

Metromover Shuttle between Overtown and the Port – Alternative 2

A 1.6-mile Metromover between the Freedom Tower Metromover Station on the Omni Loop to PortMiami utilizing the FEC Railroad corridor. A new transfer station will be required. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals. The cost per mile of the elevated Metromover is $174 million plus $28 million for each station.

Advantages

- The operations of the Omni Loop would not be impacted, and a new bridge across the channel wouldn’t be necessary

Drawbacks

- Relatively high cost per mile
- Possible capacity limitations, especially for cruise passengers with luggage
- Two transfers may be required for most passengers at the Freedom Tower station, which could be inconvenient for cruise passengers with baggage, etc.
- More Metromover vehicles would be needed to operate the shuttle service
- The shuttle would have to connect to the Metromover mainline to access the maintenance and storage yards, as well as construction of a new station adjacent to the Freedom Tower station

Metromover Shuttle between Overtown and the Port – Alternative 5

A 1.9-mile Metromover shuttle operation from south of the Historic Overtown/Lyric Theatre Metromover Station to PortMiami utilizing the NE 6th Street corridor. This alternative will require the construction of a new station, vertical circulation for the Overtown terminus of the shuttle and a 50- to 60-ft elevated guideway to provide clearance to the Metromover along NE 2nd Avenue. The existing Port Boulevard Bridge will be retrofitted by removing one vehicular travel lane in the eastbound direction in order to provide sufficient spacing to accommodate the Metromover. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the

Advantages

- Does not require revision or impact to current Metrorail operations since it is only a shuttle service and does not impact Metrorail’s operations

Drawbacks

- Relatively high construction costs of $210 million cost per mile
proposed World Trade Center and the other two serving the cruise terminals.

**Advantages**
- This shuttle doesn’t impact the current operations of Metromover
- Shuttles would be able to meet the potential high demands for ridership with frequent headways
- Only one transfer is needed at the Overtown station, although may be inconvenient

**Drawbacks**
- High cost of elevated stations plus the $174 million per mile cost estimate for the shuttle
- The alignment along NE 6th Street could take a lane of traffic or close a sidewalk
- Historic preservation issues due to the close proximity to the Freedom Tower
- Overall design of the station will be difficult due to the east-west orientation needed around the existing structures present
- Additional Metromover vehicles will also be required for the shuttle service

**Metromover Outer Loop Extension from the Freedom Tower Station – Alternative 6**
A 1.6 mile extension beginning just south of the Freedom Tower Metromover Station by providing a new mover switch to provide access to PortMiami. An elevated guideway will be positioned on the south side of NE 6th Street to prevent encroachment on the Freedom Tower historical building. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals.

**Advantages**
- The extension is shorter than other proposed alternatives, and will be supported by the existing Port Bridge, both of which save on costs

**Drawbacks**
- Operations on the Omni Loop will be impacted during the construction of the Port Loop, and once the Port Loop is in operation, the headways for the Omni and Brickell loops will be negatively impacted
- Will require removing one vehicular travel lane from the NE 6th Street alignment
- The existing Port Boulevard Bridge will be retrofitted by removing one vehicular travel lane in the eastbound direction in order to provide sufficient spacing to accommodate the Metromover
- More Metromover vehicles would be required

**Metromover Inner/Outer Loop Extension from the College North Station – Alternative 7**
A 1.8-mile Metromover extension that would switch from the inner loop just east of the College/North Station to a new guideway that would have to cross the Outer Loop at the curve then cross the Omni Loop. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals.

**Advantages**
- Has the shortest ride to the Port from downtown and would operate on the existing Port Bridge

**Drawbacks**
- Would require a transfer at the Metrorail/Metromover station, which could be inconvenient for passengers unfamiliar with the system or with extra luggage
- More Metromover vehicles would be required
- The construction of this Port Loop would impact the Inner and Outer Loops of the existing Metromover, as well as increasing network headways once operational

**Light Rail (Street Car) Shuttle from Overtown to the Port – Alternative 8**
A 1.9-mile light rail technology operating as a shuttle between the Overtown Metrorail Station to PortMiami. New tracks and overhead catenary lines would be constructed along NW/NE 6th Street and the Port Boulevard Bridge, as well as new at-grade stations along the length of the shuttle. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals.

**Advantages**
- It is by far the cheapest alternative at $65 million per mile and the at-grade stations costs are minimal
- Would not impact current Metrorail or Metromover operations at any point during construction or operation
- Would be able to accommodate various demands in ridership
- Could act as the catalyst for more future light rail developments in Miami and create good precedent for the city

**Drawbacks**
- New vehicles would need to be acquired and a new maintenance and storage facility would need to be built
- Passengers would require one transfer in Downtown Miami
- Because the light rail would operate at grade, traffic would be affected throughout downtown and on the Port Bridge

**Initial Tier 1 Alternatives Evaluation**
After reviewing each alternative based on the following criteria, four of the alternatives were recommended for further consideration.
proposed World Trade Center and the other two serving the cruise terminals.

### Advantages
- This shuttle doesn’t impact the current operations of Metromover.
- Shuttles would be able to meet the potential high demands for ridership with frequent headways.
- Only one transfer is needed at the Overtown station, although may be inconvenient.

### Drawbacks
- High cost of elevated stations plus the $174 million per mile cost estimate for the shuttle.
- The alignment along NE 6th Street could take a lane of traffic or close a sidewalk.
- Historic preservation issues due to the close proximity to the Freedom Tower.
- Overall design of the station will be difficult due to the east-west orientation needed around the existing structures present.
- Additional Metromover vehicles will also be required for the shuttle service.

### Light Rail (Street Car) Shuttle from Overtown to the Port – Alternative 8
A 1.9-mile light rail technology operating as a shuttle between the Overtown Metrorail Station to PortMiami. New tracks and overhead catenary lines would be constructed along NW/NE 6th Street and the Port Boulevard Bridge, as well as new at-grade stations along the length of the shuttle. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals.

### Advantages
- It is by far the cheapest alternative at $65 million per mile and the at-grade stations costs are minimal.
- Would not impact current Metrorail or Metromover operations at any point during construction or operation.
- Would be able to accommodate various demands in ridership.
- Could act as the catalyst for more future light rail developments in Miami and create good precedent for the city.

### Drawbacks
- New vehicles would need to be acquired and a new maintenance and storage facility would need to be built.
- Passengers would require one transfer in Downtown Miami.
- Because the light rail would operate at grade, traffic would be affected throughout downtown and on the Port Bridge.

### Initial Tier 1 Alternatives Evaluation
After reviewing each alternative based on the following criteria, four of the alternatives were recommended for further consideration.
**Tier 2 Alternative Concepts**

Potential future passengers taking transit to the Port can be broken down into the categories of cruise passengers, Port employees, visitors, and other users of the Port. A variety of sources were used to determine the overall employment population at the Port, such as past economic impact studies, major employer surveys, and the PortMiami 2035 Master Plan. Employment projections combined with the forecasted growth of cruise passengers help illustrate the future demand for transit ridership to the Port. Annual passenger forecasts must be translated into daily and peak loads associated with cruise ship operations to predict service demands for transit ridership to the Port. The table below compares Tier 2 alternatives’ crush loads for current operations and for 2035.

<table>
<thead>
<tr>
<th>Tier 2 Alternative Crush Loads</th>
<th>Opening Year</th>
<th>Build Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debarking PAX</td>
<td>16,800</td>
<td>32,000</td>
</tr>
<tr>
<td>Clearance Time</td>
<td>3-Hour Window</td>
<td>5-Hour Window</td>
</tr>
<tr>
<td>Passengers/ Hour</td>
<td>5,600 PAX</td>
<td>10,666 PAX</td>
</tr>
<tr>
<td>Assume 12.5% on Rail</td>
<td>700 PAX/ Hour</td>
<td>1,333 PAX/ Hour</td>
</tr>
<tr>
<td>Metromover with 60 seated PAX/car</td>
<td>13 cars/hour</td>
<td>22 cars/hour</td>
</tr>
<tr>
<td>Metromover with 40 seated PAX/car</td>
<td>18 cars/hour</td>
<td>34 cars/hour</td>
</tr>
</tbody>
</table>

**Metromover Shuttle between Freedom Tower Station and the Port – Alternative 4**

A 1.6-mile Metromover shuttle between the Freedom Tower Metromover Station on the Omni Loop to PortMiami using the FEC Railroad corridor. A new transfer station will be required. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals. The cost per mile of the elevated Metromover is $174 million plus $28 million for each station.

**Advantages**
- The operations of the Omni Loop would not be impacted, and a new bridge across the channel wouldn’t be necessary

**Drawbacks**
- Relatively high cost per mile
- Possible capacity limitations, especially for cruise passengers with luggage
- Two transfers may be required for most passengers at the Freedom Tower station, which could be inconvenient for cruise passengers with baggage, etc.
- More Metromover vehicles would be needed to operate the shuttle service
- The shuttle would have to connect to the Metrorail mainline to access the maintenance and storage yards, as well as construction of a new station adjacent to the Freedom Tower station

**Metromover Shuttle between Overtown and the Port – Alternative 5**

A 1.9-mile Metromover shuttle operation from south of the Historic Overtown/Lyric Theatre Metrorail Station to PortMiami utilizing the NE 6th Street corridor. This alternative will require the construction of a new station, vertical circulation for the Overtown terminus of the shuttle and a 50-ft to 60-ft elevated guideway to provide clearance to the Metromover along NE 2nd Avenue. The existing Port Boulevard Bridge will be retrofitted by removing one vehicular travel lane in the eastbound direction in order to provide sufficient spacing to accommodate the Metromover. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the...
Initial Tier 1 Alternative Concepts

Commuter Rail Service to the Port - Alternative 1
A two-mile extension of the commuter rail service to the Port, using either the FDOT’s planned South Florida East Coast Corridor service or the private All Aboard Florida service, as they are developed.

Advantages
- Would not require additional vehicles for this operation
- The existing track and rail bridge have already been upgraded as a part of an early TIGER II grant
- Only capital costs would be needed for additional track on the Port side and construction of at-grade stations
- Implementation would be simultaneous with either of the FEC projects
- The service would offer the highest capacity vehicles

Drawbacks
- Passengers from the Airport and Metrorail would require a transfer from the Overtown Station
- FEC would need to reconsider the design of their Downtown Central terminal to allow the train to continue on to the Port, requiring substantial maneuvering and switching to serve both facilities
- With limited headways, limited station locations and infrequent service, this option would have lower capacity as a service and may not serve the needs of cruise passengers

Metromover Extension to the Port - Alternative 2
A 1.9-mile elevated Metromover extension from the Historic Overtown/Lyric Theatre Metromover Station to PortMiami using either the NE 6th Street corridor or the Port Boulevard Bridge. It will require the construction of a new station and vertical circulation for the Overtown terminus of the shuttle, a 50-ft to 60-ft elevated guideway to provide clearance to the existing FEC Railroad corridor, and as well as a new bridge across the Intracoastal Waterway to the Port.

Advantages
- A direct ride from MIA or Dadeland directly to the Port
- Has the highest cost estimate at $210 million per mile.
- The minimum turning radius (1270 feet) is not met with either of the operating scenarios

Drawbacks
- Requires one transfer for all passengers
- Requires re-orientation service so a direct line is operational from the MIC station to PortMiami; or, 2) Re-orientation of service so a direct line from Dadeland South to PortMiami is available. This alternative requires a 50-ft to 60-ft elevated guideway to provide clearance to the existing FEC Railroad corridor, as well as a new bridge across the Intracoastal Waterway to the Port.

Metromover Shuttle between Overtown and the Port - Alternative 3
A 1.6-mile Metromover shuttle operation from south of the Historic Overtown/Lyric Theatre Metromover Station to PortMiami using either the existing FED corridor or the NE 6th Street corridor. This alternative will require the construction of a new station and a third level structure that will be approximately 50-ft to 60-ft above the ground. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals. Land uses consist of Vacant Nonresidential, Vacant Residential, Retail/Office, Public/Semi-Public and Institutional. The estimated annual operating and maintenance costs are estimated to be $2.2 million (2011 dollars)

Advantages
- The extension is shorter and will be supported by the existing Port Bridge, both of which saves on costs
- No identified impacts to wetlands or any identified adjacent historical resources

Drawbacks
- Even though it is grade separated, the Metromover provides the slowest trip to the Port (avg. 12mph)
- The elevated alignment will visually impact the historic Freedom Tower
- Twelve new vehicles would be needed

Metromover Outer Loop Extension from the Freedom Tower Station - Alternative 3
An extension beginning just south of the Freedom Tower Metromover Station by providing a new railway switch to provide access to PortMiami, operating off the outer loop. An elevated guideway will be positioned on the south side of NE 6th Street to prevent encroachment on the historical Freedom Tower building. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals. Land uses consist of Vacant Nonresidential, Vacant Residential, Retail/Office, Public/Semi-Public and Institutional. The estimated annual operating and maintenance costs are estimated to be $3.98 million (2011 dollars)

Advantages
- No identified impacts to wetlands for this alternative

Drawbacks
- The headway on the Port Loop added to the Outer Loop with the combined 3 minute headways provided by the Omni and the Brickell Loop is not within the operating capacity of the system
- The elevated alignment will visually impact the historic Freedom Tower

Light Rail Shuttle from Overtown to the Port - Alternative 4
An at-grade light rail shuttle from the Historic Overtown/Lyric Theatre Metromover Station to PortMiami with new tracks and catenary lines along NW/NE 6th Street and the Port Boulevard Bridge. It will require the construction of new at-grade stations along the length of the shuttle. There will be a new station on-site at the American Airlines Arena and either two or three stations constructed at the Port; one serving the proposed World Trade Center and the other two serving the cruise terminals. The estimated annual operating and maintenance costs are estimated to be $2.8 million (2011 dollars)

Advantages
- Would not impact current Metromover or Metromover operations

Drawbacks
- Requires one transfer for all passengers

---

### Distance and Cost Table

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Distance (miles)</th>
<th># Stations</th>
<th>Guideway Cost (millions)</th>
<th>Stations Cost (millions)</th>
<th>Total Cost (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metromover</td>
<td>1.9</td>
<td>5</td>
<td>$330</td>
<td>$140</td>
<td>$470</td>
</tr>
<tr>
<td>Vehicles</td>
<td>8</td>
<td></td>
<td>$498.8 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metromover</td>
<td>1.6</td>
<td>4</td>
<td>$278</td>
<td>$112</td>
<td>$390</td>
</tr>
<tr>
<td>Light Rail</td>
<td>1.9</td>
<td>5</td>
<td>$220</td>
<td>$100</td>
<td>$320</td>
</tr>
<tr>
<td>Metromover</td>
<td>1.6</td>
<td>4</td>
<td>$220</td>
<td>$100</td>
<td>$320</td>
</tr>
</tbody>
</table>
The final recommended alternatives for further study are the Metromover Shuttle and the Light Rail Shuttle.

Implementation Plan and Schedule

- Project Development (PD) and NEPA completed by locals (per MAP-21)
- PD and NEPA could be completed by 2016 if funding secured
- Engineering and New Starts applications process 2017-2019
- Stations funding opportunities: CRA, Arena/Bayside, Port, City, adjacent developers
- Design/Engineering and Construction equal participation from FTA, FDOT and locals
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Purpose of Study

The purpose of this MPO study, ‘Transit Options to PortMiami Feasibility Study’, is to examine the potential for providing a transit connection between PortMiami and Downtown Miami as recommended by the most recent PortMiami 2035 Plan adopted by the Miami-Dade Board of County Commissioners. This study seeks to analyze several modes, routes and combinations of transit to PortMiami.

In order to accommodate future growth, PortMiami is continually expanding its intermodal capabilities. The PortMiami Tunnel is currently under construction and is anticipated to be completed in 2014. This project will allow port traffic to move more efficiently to and from the expressway system. Also, through its partnership with Florida East Coast (FEC), PortMiami is augmenting its freight traffic by reinstating its rail service and developing a new rail yard facility. However, these projects only improve some elements of PortMiami’s intermodal capabilities. The transportation alternatives for cruise passengers and the growing number of Port employees continue to be limited, and the land required for additional parking is constrained. With this anticipated future growth, and with construction of the tunnel which will provide additional roadway access for freight, the opportunity to study and implement alternatives to other modes of transportation becomes a necessity. This proposed transit connection would expand PortMiami’s intermodal capabilities for cruise passengers and Port employees alike.

A new transit connection would provide opportunities, such as decreased vehicular traffic to the Port; reducing emissions due to idling, and advancing the Port’s vision of attaining clean air quality in the region.