

MIAMIBEACH LIGHT RAIL MODERN STREETCAR

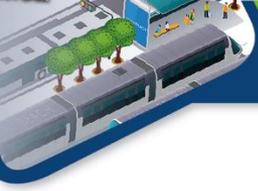
CMB Commission Meeting
June 08, 2016



MIAMIBEACH

Kimley»»Horn





Project Background

- 2015 – MPO Beach Corridor Transit Connection Study recommended advancing the project:
 - Miami Beach Light Rail Circulator
 - Miami Light Rail Circulator
 - Causeway Connection
- In December 2015 Miami Beach initiated the environmental review process for the Miami Beach Light Rail Circulator component of the regional program
- Miami Beach received unsolicited proposal to design, build, finance, operate and maintain and an off-wire LRT/streetcar line as a Public Private Partnership (P3) in Miami Beach
 - Miami Beach issued a notice for proposals pursuant to state statute in parallel to the ongoing environmental study



Solicitation Process for P3 Partnership

- Three proposals were received on May 10th, 2016
- An Evaluation Committee has been formed
- The City Commission will approve final rankings and authorize negotiations for an interim agreement tentatively scheduled for July
- Additional information available at the City of Miami Beach website: www.miamibeachfl.gov

Project Development Overview

- Preliminary Phase 1/
Phase 2 alignment based on 2015 Beach Corridor Transit Connection Study (To be Refined)
- Catenary-free/off-wire technologies
- Streetcar will operate in exclusive lanes
- Planned to be inter-operable with future extension to Miami





First Steps -Track & Stops Assumptions

- Bi-directional Loop
- Operations (under evaluation):
 - ✓ 6.0 - 7.5 Minute Frequencies
 - ✓ Hours of Operation: 5:30 AM to 2:00 AM



First Steps -Track & Stops Assumptions

Stops

- Approximately three (3) stops per mile
- ADA accessibility will be provided at every stop
- Platforms will be 180 feet in length and 10 feet to 15 feet wide
- Platform height shall be about two (2) steps above ground



First Steps -Track & Stops Assumptions

Stops (continued)

- Platforms will provide level boarding to all vehicle doors
- Stop amenities will blend into the overall streetscape



Miami Beach Light Rail/Modern Streetcar Project



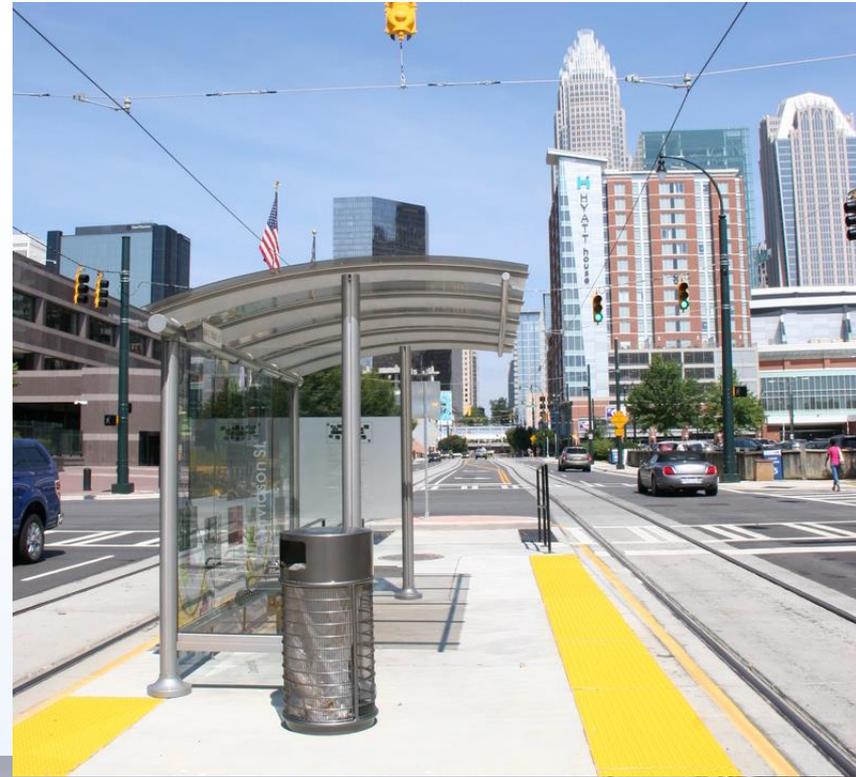
Stops - Elements

- Tactile edge strip
- Canopy
- Kiosk / map
- Signage
- Seating / leaning rail



Stops - Elements

- Trash receptacle
- Railings
- Lighting
- Train arrival messaging
- Ticket vending





Center Stop - Dual Loading





Center Stop - Split Loading





5th Street - Cross Section



Variable Width
Sidewalk

4'
Bike
Lane

11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

11'
Turn
Lane

Variable Width
Median

11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

4'
Bike
Lane

Variable Width
Sidewalk

Typical Existing Condition



5th Street - Cross Section



| | | | | | | | | | | | | | | | | |
|-------|----|---------------------------|---------------------------|---------------------------|------------------|----|------------|----|------------------|---------------|---------------------------|---------------------------|---------------------------|---------------------------|----|---------------------------------------|
| 11.5' | 2' | 6' Bike Lane w/ 3' Buffer | 11' Vehicular Travel Lane | 11' Vehicular Travel Lane | 12' Transit Lane | 2' | 10' Median | 2' | 12' Transit Lane | 10' Turn Lane | 11' Vehicular Travel Lane | 11' Vehicular Travel Lane | 11' Vehicular Travel Lane | 6' Bike Lane w/ 3' Buffer | 2' | 11.5' Sidewalk with 6' Planting Strip |
|-------|----|---------------------------|---------------------------|---------------------------|------------------|----|------------|----|------------------|---------------|---------------------------|---------------------------|---------------------------|---------------------------|----|---------------------------------------|

Proposed Alternative 1



5th Street - Cross Section



12.5'
Sidewalk &
10' Planting Strip

2'
6' Bike
Lane w/
3' Buffer

11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

10'
Turn
Lane

2'
10'
Median

2'
11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

6' Bike
Lane w/
3' Buffer

12'
Transit
Lane

12'
Transit
Lane

2'
12.5'
Sidewalk

Proposed Alternative **2**



5th Street - Cross Section



| | | | | | | | | | | | | | | | |
|------------------------------|----|-----------------------|-----------------------|-----------------------|--------------|----|--------|----|--------------|--------------|-----------------------|-----------------------|-----------------------|----|------------------------------|
| 13' | 2' | 11' | 11' | 11' | 12' | 2' | 10' | 2' | 12' | 10' | 11' | 11' | 11' | 2' | 13' |
| Sidewalk & 8' Planting Strip | | Vehicular Travel Lane | Vehicular Travel Lane | Vehicular Travel Lane | Transit Lane | | Median | | Transit Lane | Turning Lane | Vehicular Travel Lane | Vehicular Travel Lane | Vehicular Travel Lane | | Sidewalk & 8' Planting Strip |

Proposed Alternative 3



Washington Avenue - Existing Cross Section



Variable Width Sidewalk

7' Parking Stalls

11' Vehicular Travel Lane

11' Vehicular Travel Lane

Variable Width Median

11' Vehicular Travel Lane

11' Vehicular Travel Lane

7' Parking Stalls

Variable Width Sidewalk

Typical Existing Condition



Washington Avenue- Proposed Cross Section



Proposed Alternative 1



Washington Avenue- Proposed Cross Section



| | | | | | | | | | | | | |
|-------------|----|-------------------------------------|--------------|---------------------------|------------------|------------|------------------|---------------------------|--------------|-------------------------------------|----|-------------|
| 8' Sidewalk | 2' | 7' loading zone / bus bay / parklet | 5' Bike Lane | 11' Vehicular Travel Lane | 12' Transit Lane | 10' Median | 12' Transit Lane | 11' Vehicular Travel Lane | 5' Bike Lane | 7' loading zone / bus bay / parklet | 2' | 8' Sidewalk |
|-------------|----|-------------------------------------|--------------|---------------------------|------------------|------------|------------------|---------------------------|--------------|-------------------------------------|----|-------------|

Proposed Alternative **2**



Washington Avenue- Proposed Cross Section



| | | | | | | | | | | |
|--------------|----|---------------------------|---------------------------|------------------|------------|------------------|---------------------------|---------------------------|----|--------------|
| 10' Sidewalk | 2' | 11' Vehicular Travel Lane | 10' Vehicular Travel Lane | 12' Transit Lane | 10' Median | 12' Transit Lane | 11' Vehicular Travel Lane | 11' Vehicular Travel Lane | 2' | 10' Sidewalk |
|--------------|----|---------------------------|---------------------------|------------------|------------|------------------|---------------------------|---------------------------|----|--------------|

*Loading Zones on Side Streets

Proposed Alternative **3**



Washington Avenue- Proposed Cross Section



| | | | | | | | | | | |
|--------------|----|---------------------|---------------------------|------------------|------------|------------------|---------------------------|---------------------|----|--------------|
| 10' Sidewalk | 2' | 11' Bus / Bike Lane | 10' Vehicular Travel Lane | 12' Transit Lane | 10' Median | 12' Transit Lane | 11' Vehicular Travel Lane | 11' Bus / Bike Lane | 2' | 10' Sidewalk |
|--------------|----|---------------------|---------------------------|------------------|------------|------------------|---------------------------|---------------------|----|--------------|

*Loading Zones on Side Streets

Proposed Alternative 4



17th Street – Existing Cross Section



| | | | | | | |
|-------------------------|----------------------------|----------------------------|------------------------------------|----------------------------|----------------------------|-------------------------|
| Variable Width Sidewalk | 9.5' Vehicular Travel Lane | 9.5' Vehicular Travel Lane | Alternating Direction Turning Lane | 9.5' Vehicular Travel Lane | 9.5' Vehicular Travel Lane | Variable Width Sidewalk |
|-------------------------|----------------------------|----------------------------|------------------------------------|----------------------------|----------------------------|-------------------------|

Typical Existing Condition
(Between Meridian & Michigan)



17th Street – Proposed Cross Section



| | | | | | | | |
|-----------------|----|---------------------------------|---------------------|---------------------|---------------------------------|----|-----------------|
| 10' Sidewalk | 2' | 11' Vehicular Travel Lane | 12' Transit Lane | 12' Transit Lane | 11' Vehicular Travel Lane | 2' | 10' Sidewalk |
|-----------------|----|---------------------------------|---------------------|---------------------|---------------------------------|----|-----------------|

Typical Proposed Condition
(Between Meridian & Michigan)



17th Street – Existing Cross Section



| | | | | | | | |
|-------------------------|----------------------------|-------------------|-----------------------|---------------------------|---------------------------|-------------------------------|-------------------------|
| Variable Width Sidewalk | 9.0' Vehicular Travel Lane | 9.5' Turning Lane | Variable Width Median | 10' Vehicular Travel Lane | 10' Vehicular Travel Lane | 6' Lane Buffer / Loading Zone | Variable Width Sidewalk |
|-------------------------|----------------------------|-------------------|-----------------------|---------------------------|---------------------------|-------------------------------|-------------------------|

Typical Existing Condition

(Between Pennsylvania & Washington)



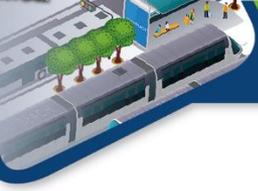
17th Street – Proposed Cross Section



| | | | | | | | | |
|-----------------|----|---------------------------------|------------------------|---------------|------------------------|---------------------------------|----|-----------------|
| 20' Sidewalk | 2' | 11' Vehicular Travel Lane | 12' Transit Lane | 10' Median | 12' Transit Lane | 11' Vehicular Travel Lane | 2' | 20' Sidewalk |
|-----------------|----|---------------------------------|------------------------|---------------|------------------------|---------------------------------|----|-----------------|

Typical Proposed Condition

(Between Pennsylvania & Washington)



Dade Blvd Option Compared to 17th Street

- Adds \$18M (PW Site) or \$42M (17th Street Site)
- Additional ½ Mile of Track
- Adds 3 minutes to trip times
- Abuts less dense land uses
- Approximately the same level of traffic impacts



Alton Road – Existing Cross Section



Variable Width
Sidewalk &
Parking Stalls

11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

17' Median /
Alternating Direction
Turn Lane

11'
Vehicular
Travel Lane

11'
Vehicular
Travel Lane

7'
Parking
Stalls

Variable Width
Sidewalk

Typical Existing Condition



Alton Road – Proposed Cross Section



| | | | | | | | | | | |
|--------------|----|---------------------------|---------------------------|------------------|------------|------------------|---------------------------|---------------------------|----|--------------|
| 10' Sidewalk | 2' | 11' Vehicular Travel Lane | 11' Vehicular Travel Lane | 12' Transit Lane | 10' Median | 12' Transit Lane | 11' Vehicular Travel Lane | 11' Vehicular Travel Lane | 2' | 10' Sidewalk |
|--------------|----|---------------------------|---------------------------|------------------|------------|------------------|---------------------------|---------------------------|----|--------------|

Typical Proposed Condition



Other Considerations (All Roadways)

- Left turn restrictions required & currently under evaluation
- Impacts to on-street parking
- Potential streetscape modifications with possible grass tracks & planted medians



Transit Hub

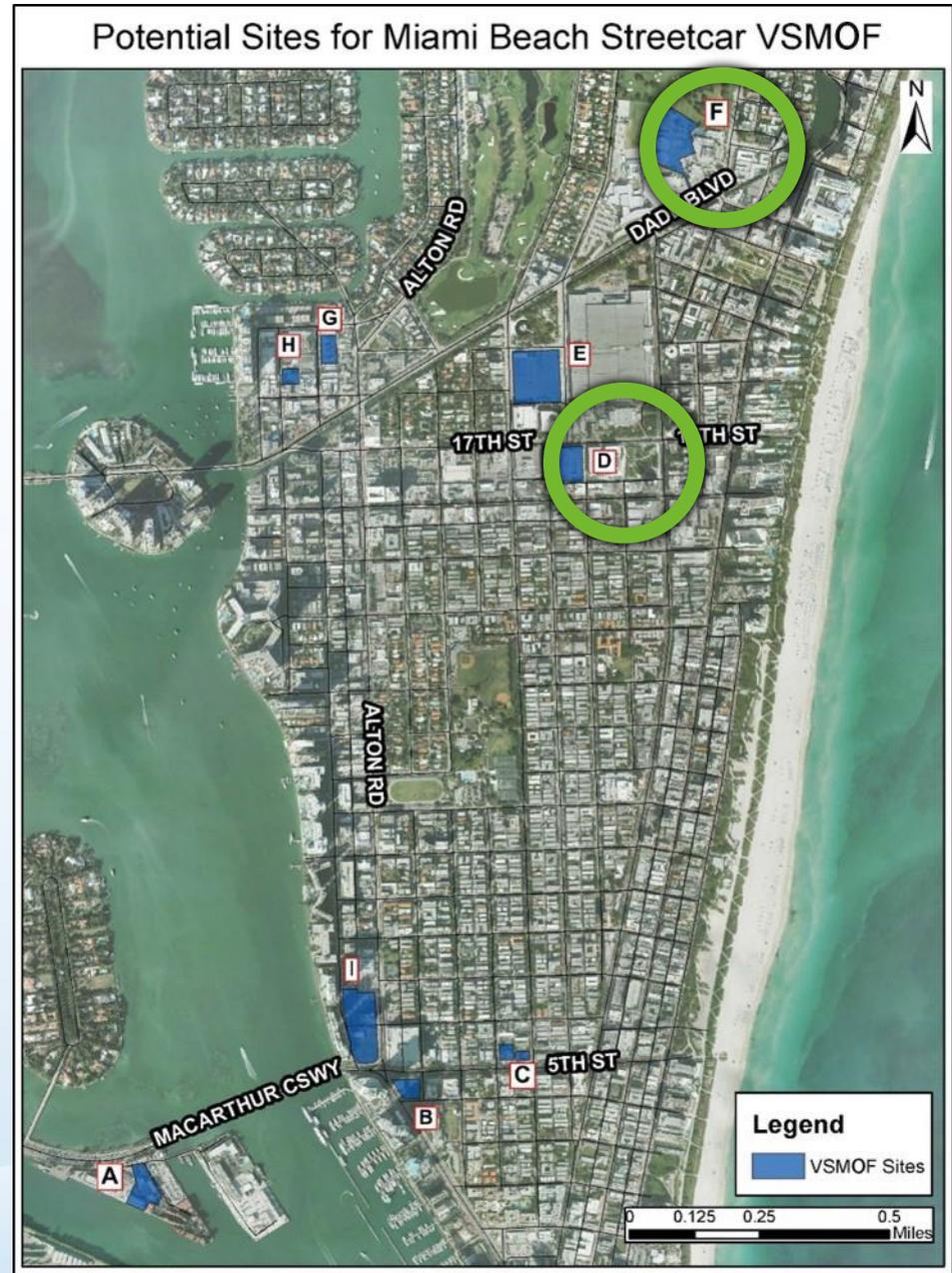
Attributes:

- Inter-operable
- Appropriately Sized (1-2Acres)
- Good Access and Circulation
- Attract Motorists with Parking
- Bus Bays
- Vicinity of Alton Road & 5th Street
- Potential other locations



Vehicle Storage, Maintenance, and Operations Facility (VSMOF)

9 potential locations were narrowed to 2 that met minimum criteria





VSMOF Assumptions for Review of Environmental Impact

- Minimum practical size 2 acres to accommodate fleet of 12 – 14 LRT/streetcar vehicles
- Oblong or rectangular in shape
- Located close to the streetcar route; minimize non-revenue track
- Site should accommodate:
 - Vehicle maintenance
 - Vehicle storage
 - Traction-power substation
 - Operations Control Center (OCC)
 - Maintenance of way parts and equipment

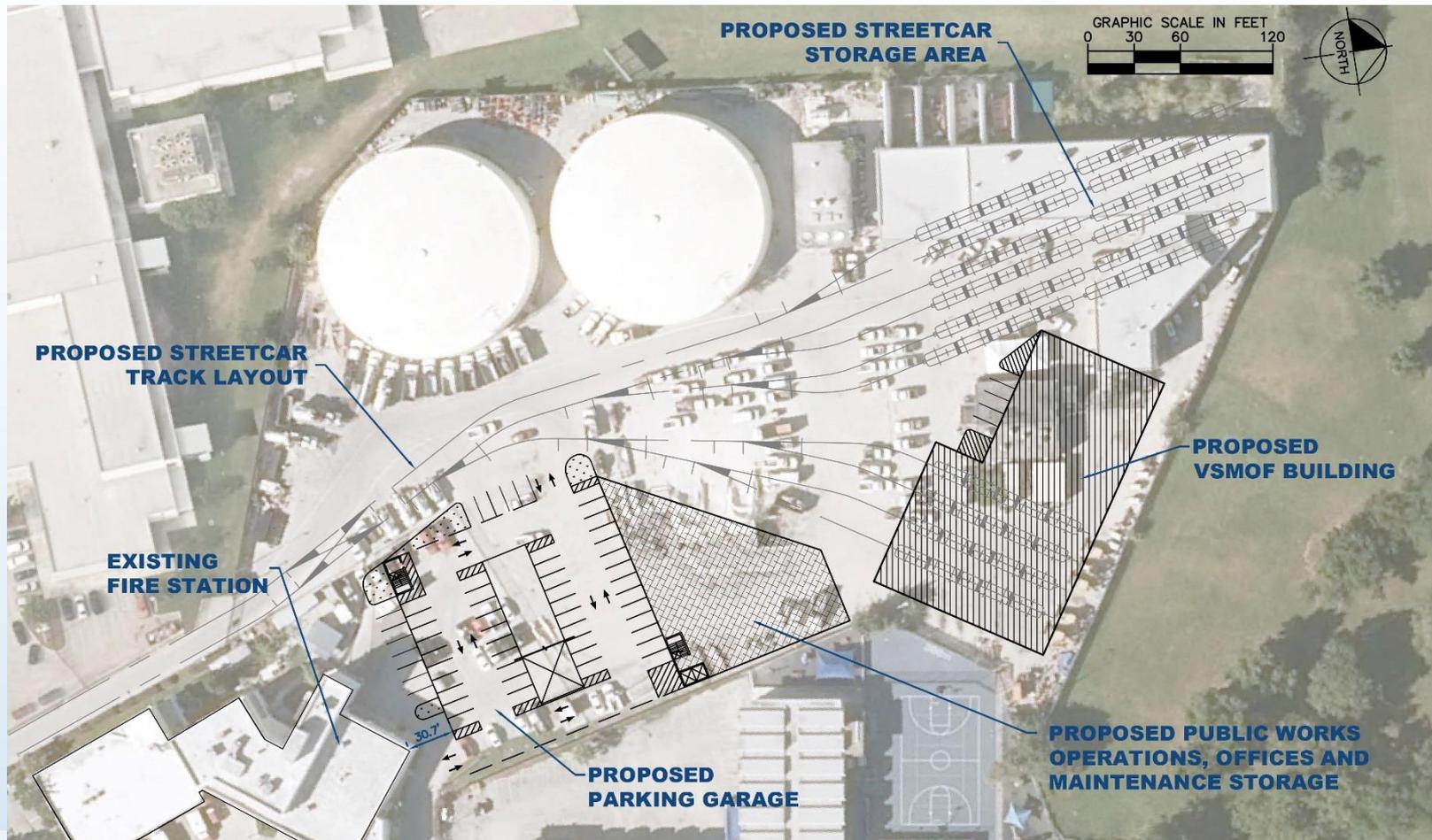


VSMOF Examples





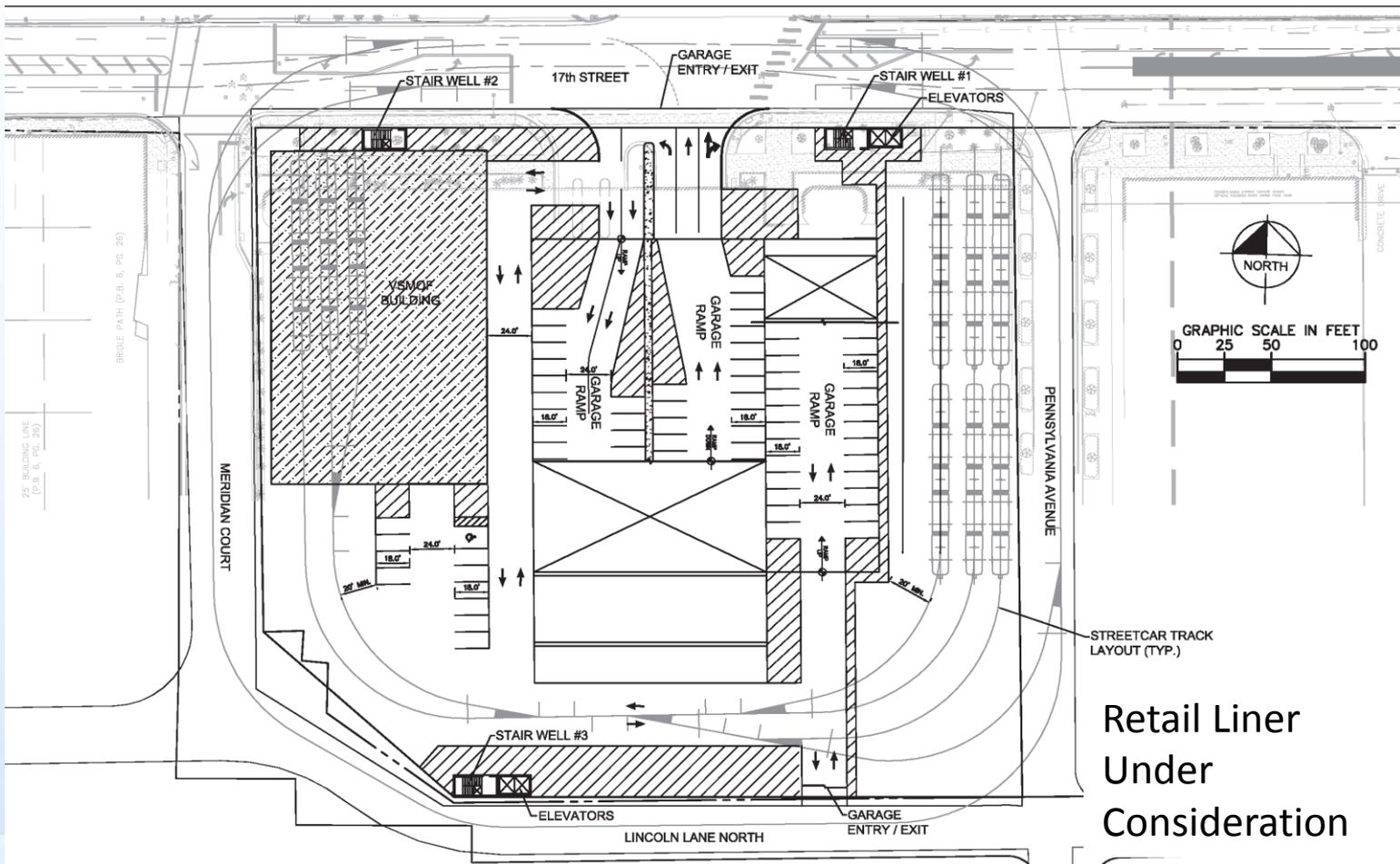
Vehicle Storage, Maintenance and Operations Facility (VSMOF) – Public Works Facility Site





Vehicle Storage, Maintenance and Operations Facility (VSMOF)

17th Street Site (1st floor shown) parking proposed above





Preliminary Cost Estimates

| Scenario | Costs |
|---|---------------|
| CAPITAL | |
| Phase 1, VSMOF – Public Works Site | \$222,000,000 |
| Phase 1, VSMOF – 17 th Street Site | \$257,000,000 |
| Phase 1 + 2, VSMOF – Public Works Site | \$387,500,000 |
| Phase 1 + 2, VSMOF – 17 th Street Site | \$410,000,000 |
| OPERATIONAL | |
| Phase 1, Peak 6 Minute Headway | \$8,600,000 |
| Phase 1, 7.5 Peak Minute Headway | \$7,700,000 |
| Phase 1 + 2, Peak 6 Minute Headway | \$16,000,000 |
| Phase 1 + 2, Peak 7.5 Minute Headway | \$14,000,000 |



Upcoming Milestones

July 13

Commissioner Endorsement of Key Elements of Preliminary Preferred Alternative (PPA)

September
2016

Completion of Draft Environmental Impact Report; Commission Endorsement of PPA

January 2017

Public Hearing / Final Environmental Impact Report – Adoption of LPA



Upcoming Decisions.....

- Commission preliminary decisions on critical items by July, 2016
 - Preferred route alignment and stops
 - Washington Avenue alternative
 - 17th Street versus Dade Blvd. alignment
 - VSMOF site
 - Transit Hub
- Commission endorsement of preliminary preferred alternative by September 2016 for draft Project Environmental Impact Report



Commission Direction

- Washington Avenue
- VSMOF Site