Silver Hill Road (MD 458) Bus Lane Concept - Suitland Metrorail Station to Randall Road

Reasons for Tactical Bus Lanes:

- Provides an important regional connection to the Metrorail Green Line
- Provides connections to large employment generators, including the US Census Bureau
- Provides access to WMATA Metrobus (P12, D12, K12, D14, V12), and Prince George's County The Bus (34)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- No parking restriction
- Commercial and office uses
- Posted Speed Limit: 35 mph

Bus Ridership:

• While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result, has increased the frequency of service.

Note: Average passenger load of all weekday bus routes in the peak direction (AM Eastbound, PM Westbound)

Concept Plan View

Changes to the Segment:

- The curbside lane would be re-purposed to become a bus lane except for the changes reflected on the terminus
- · Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Updates by Stakeholders:

 On a separate effort, Prince George's DPW&T evaluated potential crosswalk and ADA ramp upgrades through a Metropolitan Washington Council of Government Transportation Land Land-Use Connections Project.

Legend:



Bus Stop

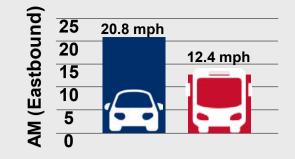


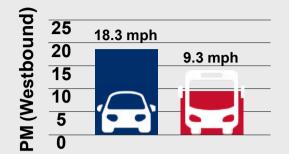
Average Peak Direction Bus Person Throughput



Bus Lane Signs (Ground Mounted, Overhead)

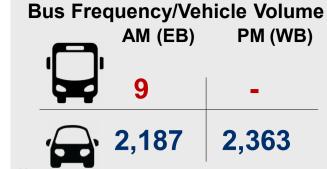
Speeds





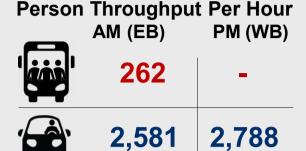
Noto:

- Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)



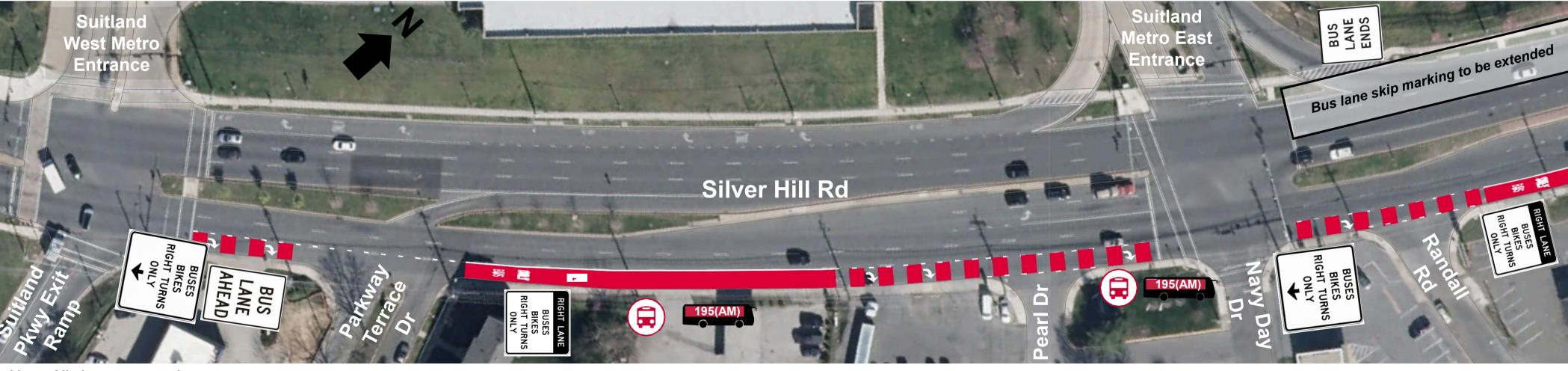
Note:

- 2019 bus frequencies provided by WMATA and TheBus
- 2022 vehicle volumes provided by MDOT SHA



Note:

- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per veh * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)
- Max peak load excludes buses run by TheBus



Note: All signs are not shown

Existing Typical Cross-Section

12'

12'

Varies

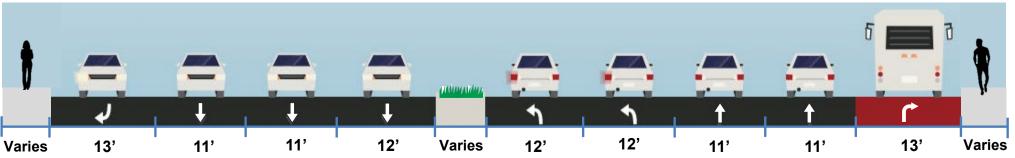
12'

Varies

13'

11'

Proposed Typical Cross-Section



Washington Metropolitan
Area Transit Authority

Silver Hill Road (MD 458) Bus Lane Concept - Navy Day Dr to Swann Rd

Reasons for Tactical Bus Lanes:

- Provides an important regional connection to the Metrorail Green Line
- Provides connections to large employment generators, including the US Census Bureau
- Provides access to WMATA Metrobus (P12, D12, K12, D14, V12), and Prince George's County The Bus (34)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- No parking restriction
- Commercial and office uses
- Posted Speed Limit: 35 mph

Bus Ridership:

• While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result, has increased the frequency of service.

Changes to the Segment:

- The curbside lane would be re-purposed to become a bus lane
- Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Legend:



Bus Stop

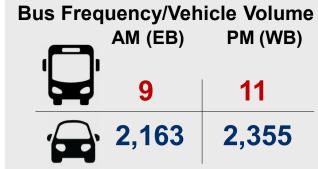
Average Peak Direction Bus Person Throughput



Bus Lane Signs (Ground Mounted, Overhead)

Speeds AM (Eastbound) 25 20.8 mph 20 12.4 mph 15 10 PM (Westbound) 25 18.3 mph 20 9.3 mph 15

- · Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)



- 2019 bus frequencies provided by WMATA and
- 2022 vehicle volumes provided by MDOT SHA

Person Throughput Per Hour AM (EB) PM (WB)



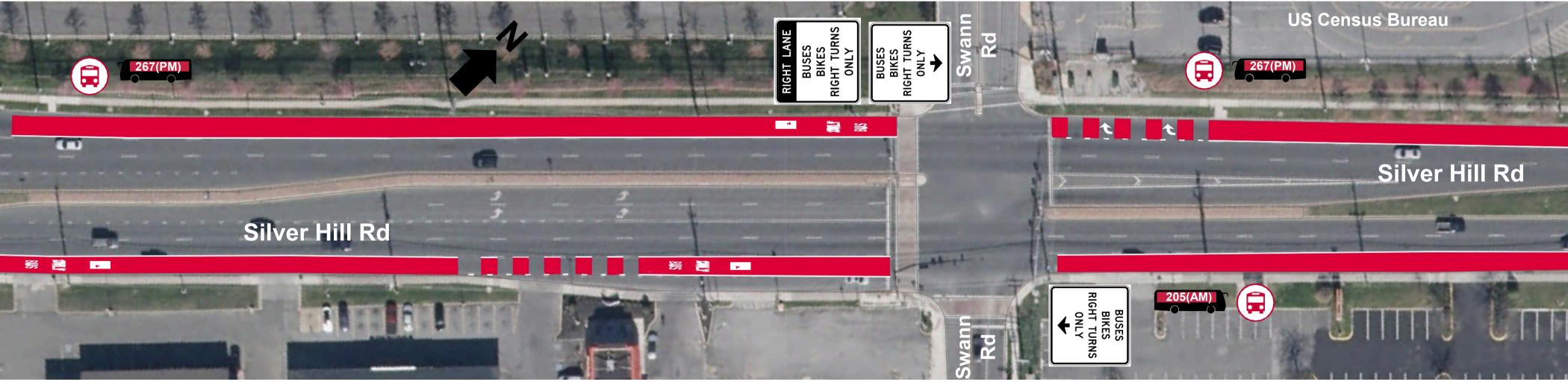
276 315



2,552 2,779

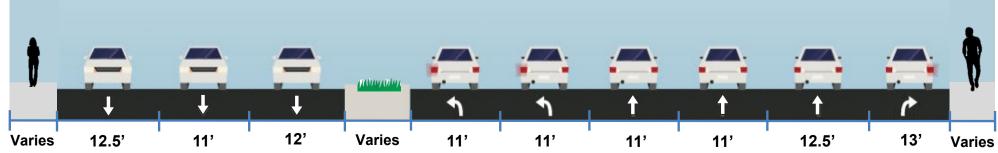
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per veh * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)
- Max peak load excludes buses run by TheBus

Concept Plan View

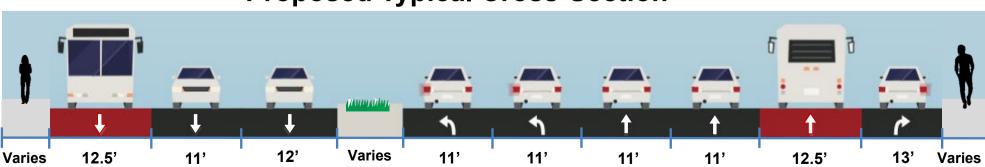


Note: All signs are not shown

Existing Typical Cross-Section



Proposed Typical Cross-Section



Washington Metropolitan **Area Transit Authority**

Silver Hill Road (MD 458) Bus Lane Concept - Swann Rd to Suitland Rd

Reasons for Tactical Bus Lanes:

- Provides an important regional connection to the Metrorail Green Line
- Provides connections to large employment generators, including the US Census Bureau
- Provides access to WMATA Metrobus (P12, D12, K12, D14, V12), and Prince George's County The Bus (34)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- No parking restriction
- Commercial and office uses
- Posted Speed Limit: 35 mph

Bus Ridership:

 While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result, has increased the frequency of service.

Changes to the Segment:

- The curbside lane would be re-purposed to become a bus lane
- Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Updates by Stakeholders:

- Towne Square at Suitland Federal Center is completing additional improvements separate from this project
- These improvements to be constructed by others include pedestrian amenities, ADA ramps and sidewalks, utility work, geometric improvements, roadway resurfacing, etc. Legend:

RIGHT LANE

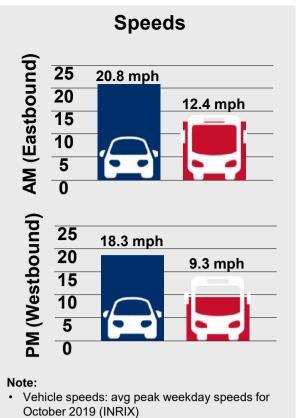
BIKES

Bus Stop



Average Peak Direction Bus Person Throughput

Bus Lane Signs (Ground Mounted, Overhead)



· Bus speeds: Fall 2019 (Ridecheck Plus)

Note:
• 2019 bus frequencies provided by WMATA and

- 2019 bus frequencies provided by WMATA as TheBus
- 2022 vehicle volumes provided by MDOT SHA

Person Throughput Per Hour AM (EB) PM (WB)

Bus Frequency/Vehicle Volume

AM (EB)

272

<u>2</u>

2,472 2,060

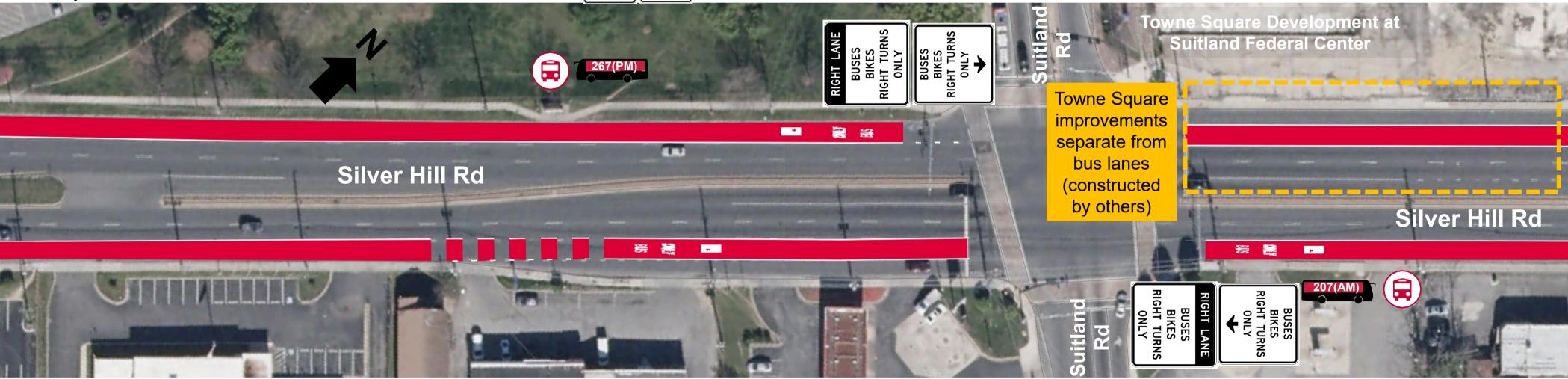
315

PM (WB)

Note:

- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per veh * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)
- Max peak load excludes buses run by TheBus

Concept Plan View

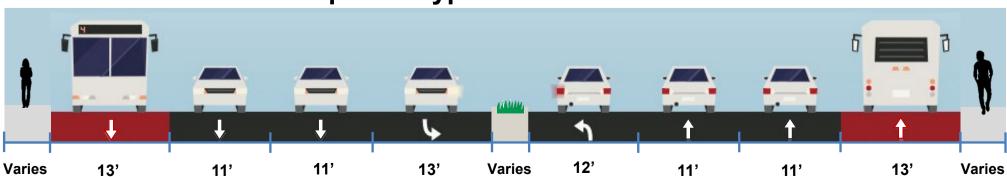


Note: All signs are not shown

Existing Typical Cross-Section

Varies 13' 11' 13' Varies 12' 11' 11' 13' Varies

Proposed Typical Cross-Section



Washington Metropolitan

Area Transit Authority

Silver Hill Road (MD 458) Bus Lane Concept - Suitland Rd to Porter Ave

Reasons for Tactical Bus Lanes:

- Provides an important regional connection to the Metrorail Green Line
- Provides connections to large employment generators, including the US Census Bureau
- Provides access to WMATA Metrobus (P12, D12, K12, D14, V12), and Prince George's County The Bus (34)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- No parking restriction
- Commercial and office uses
- Posted Speed Limit: 35 mph

Bus Ridership:

• While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result, has increased the frequency of service.

Changes to the Segment:

- The curbside lane would be re-purposed to become a bus lane
- Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Updates by Stakeholders:

 Towne Square at Suitland Federal Center is completing additional improvements separate from this project: new traffic signal and access road (Evansgreen Dr), pedestrian amenities, ADA ramps and sidewalks, utility work, geometric improvements, roadway resurfacing, etc.

Legend:

Bus Stop

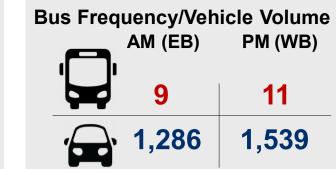


Average Peak Direction Bus Person Throughput

Bus Lane Signs (Ground Mounted, Overhead)

Speeds AM (Eastbound) 25 20.8 mph 20 15 PM (Westbound) 25 18.3 mph 20 9.3 mph

- · Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)



- 2019 bus frequencies provided by WMATA and
- 2022 vehicle volumes provided by MDOT SHA

Person Throughput Per Hour AM (EB) PM (WB) 315



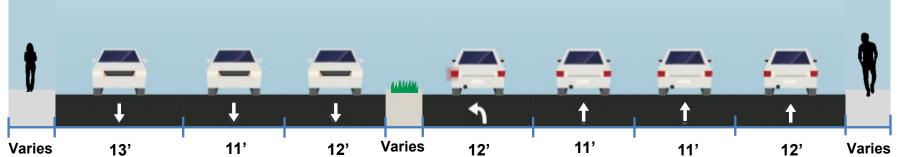
1,517 1,816

- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per veh * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)
- Max peak load excludes buses run by TheBus



Note: All signs are not shown

Existing Typical Cross-Section





Silver Hill Road (MD 458) Bus Lane Concept - Porter Ave to Brooks Dr

Reasons for Tactical Bus Lanes:

- Provides an important regional connection to the Metrorail Green Line
- Provides connections to large employment generators, including the US Census Bureau
- Provides access to WMATA Metrobus (P12, D12, K12, D14, V12), and Prince George's County The Bus (34)
- · Could provide operational benefits for many routes in a high demand

Existing Segment Characteristics:

- No parking restriction
- Single and multifamily homes, schools, and places of worship
- Posted Speed Limit: 35 mph

Bus Ridership:

• While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result, has increased the frequency of service.

Changes to the Segment:

- The curbside lane would be re-purposed to become a bus lane
- Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Legend:



Bus Stop



Average Peak Direction Bus Person Throughput





Bus Lane Signs (Ground Mounted, Overhead)

Speeds AM (Eastbound) 25 20.8 mph 20 12.4 mph 15 10 PM (Westbound) 25 18.3 mph 20 9.3 mph 15 · Vehicle speeds: avg peak weekday speeds for

- October 2019 (INRIX)
- Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume AM (EB) PM (WB) 11 1,330

- 2019 bus frequencies provided by WMATA and
- 2022 vehicle volumes provided by MDOT SHA

Person Throughput Per Hour PM (WB) AM (EB) 270 315

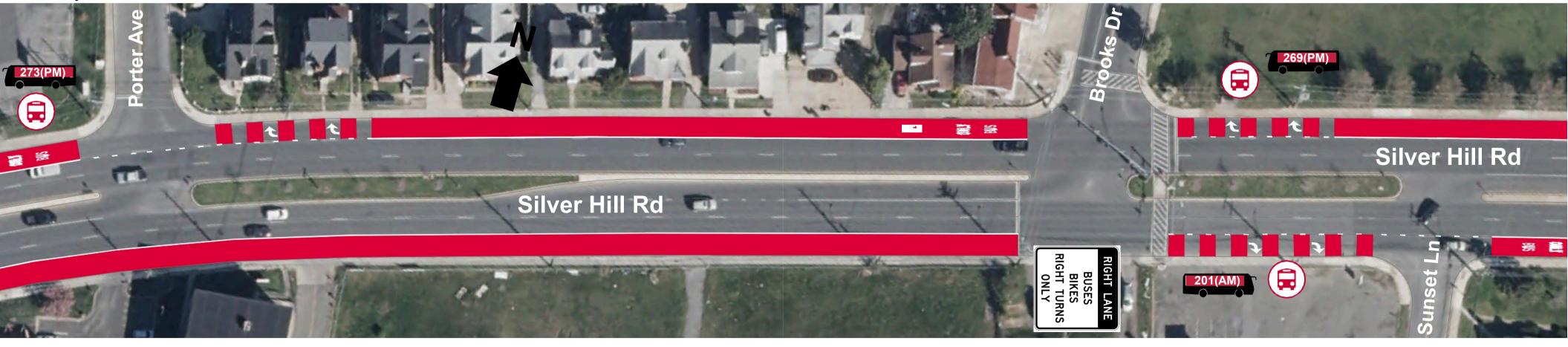


1,401

1,569

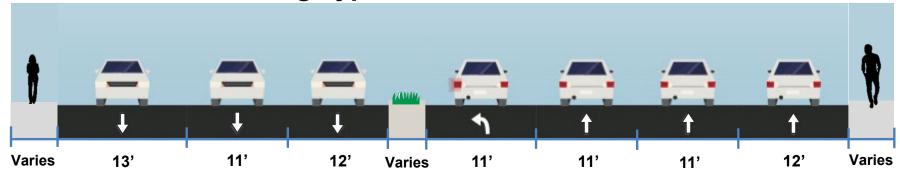
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per veh * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)
- Max peak load excludes buses run by TheBus

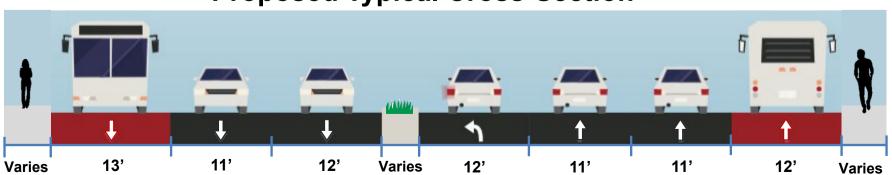
Concept Plan View



Note: All signs are not shown

Existing Typical Cross-Section





Silver Hill Road (MD 458) Bus Lane Concept - Brooks Dr to Royal Plaza Dr

Reasons for Tactical Bus Lanes:

- Provides an important regional connection to the Metrorail Green Line
- Provides connections to large employment generators, including the US Census Bureau
- Provides access to WMATA Metrobus (P12, D12, K12, D14, V12), and Prince George's County The Bus (34)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- No parking restriction
- Single and multifamily homes, schools, and places of worship
- Posted Speed Limit: 35 mph

Bus Ridership:

• While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result, has increased the frequency of service.

Changes to the Segment:

- The curbside lane would be re-purposed to become a bus lane
- Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Updates by Stakeholders:

• The new Drew-Freeman Middle School opened in August 2023.

Legend:



RIGHT LANE

BUSES

BIKES

RIGHT TURNS ONLY

Bus Stop



RIGHT TURNS

Average Peak Direction Bus Person Throughput

Bus Lane Signs (Ground Mounted, Overhead)

Speeds AM (Eastbound) 20.8 mph 20 15 PM (Westbound) 25 18.3 mph 20 9.3 mph 15

- · Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- · Bus speeds: Fall 2019 (Ridecheck Plus)

Bus Frequency/Vehicle Volume AM (EB) PM (WB) 11 995 1,370

- 2019 bus frequencies provided by WMATA and
- 2022 vehicle volumes provided by MDOT SHA

Person Throughput Per Hour AM (EB) PM (WB)



1,174 1,617

315

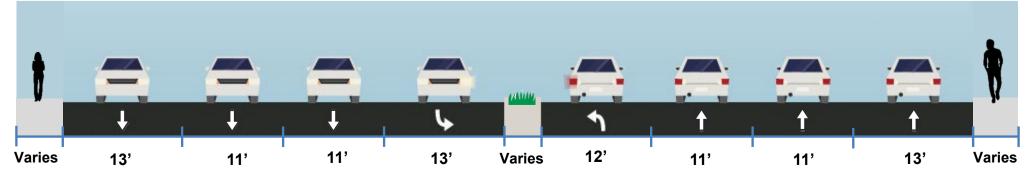
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per veh * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)
- Max peak load excludes buses run by TheBus

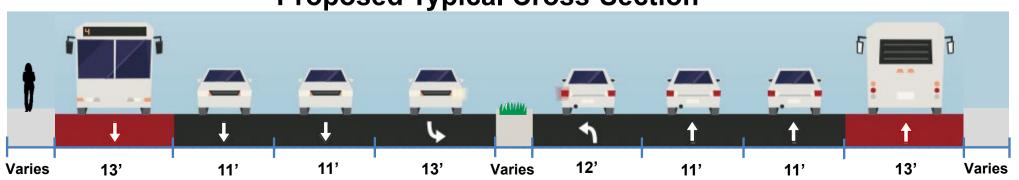
Concept Plan View



Note: All signs are not shown

Existing Typical Cross-Section





Silver Hill Road (MD 458) Bus Lane Concept - Royal Plaza Dr to Plaza Dr

Reasons for Tactical Bus Lanes:

- Provides an important regional connection to the Metrorail Green Line
- Provides connections to large employment generators, including the US Census Bureau
- Provides access to WMATA Metrobus (P12, D12, K12, D14, V12), and Prince George's County The Bus (34)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- No parking restriction
- Single and multifamily homes, schools, and places of worship
- Posted Speed Limit: 35 mph

Bus Ridership:

• While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result, has increased the frequency of service.

Concept Plan View

Changes to the Segment:

- The curbside lane would be re-purposed to become a bus lane
- Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Legend:

BUSES

RIGHT TURNS

Bus Stop

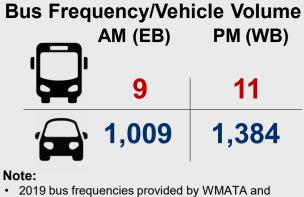
RIGHT TURNS

Average Peak Direction Bus Person Throughput

Bus Lane Signs (Ground Mounted, Overhead)

Speeds AM (Eastbound) 25 20.8 mph 20 12.4 mph 15 10 PM (Westbound) 25 18.3 mph 20 9.3 mph 15

- · Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- · Bus speeds: Fall 2019 (Ridecheck Plus)



- · 2022 vehicle volumes provided by MDOT SHA

Person Throughput Per Hour AM (EB) PM (WB)



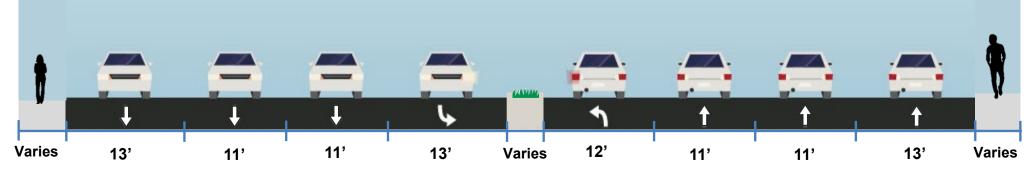


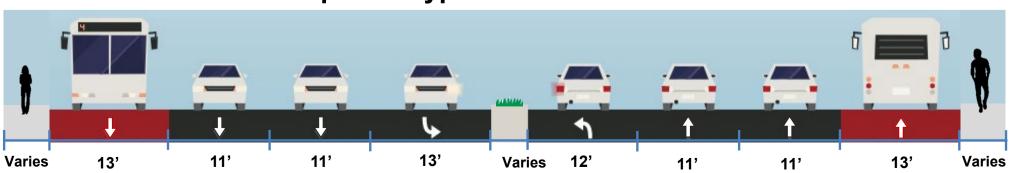
- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per veh * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)
- Max peak load excludes buses run by TheBus



Note: All signs are not shown

Existing Typical Cross-Section





Silver Hill Road (MD 458) Bus Lane Concept - Plaza Dr to West Ave

Reasons for Tactical Bus Lanes:

- Provides an important regional connection to the Metrorail Green Line
- Provides connections to large employment generators, including the US Census Bureau
- Provides access to WMATA Metrobus (P12, D12, K12, D14, V12), and Prince George's County The Bus (34)
- Could provide operational benefits for many routes in a high demand area

Existing Segment Characteristics:

- No parking restriction
- Commercial, place of worship, and childcare center
- Posted Speed Limit: 35 mph

Bus Ridership:

• While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day. WMATA expects ridership to continue to grow and as a result, has increased the frequency of service.

Changes to the Segment:

- The curbside lane would be re-purposed to become a bus lane except for the changes reflected on the terminus
- Right turns will not be restricted
- Skipped red striping will indicate where vehicles are allowed to enter the bus lane

Speeds AM (Eastbound) 25 20.8 mph 20 15 PM (Westbound) 25 18.3 mph 20 9.3 mph 15

- · Vehicle speeds: avg peak weekday speeds for October 2019 (INRIX)
- · Bus speeds: Fall 2019 (Ridecheck Plus)

• 2019 bus frequencies provided by WMATA and

2022 vehicle volumes provided by MDOT SHA

Person Throughput Per Hour

995

Bus Frequency/Vehicle Volume

PM (WB)

1,673

PM (WB)

AM (EB)



- Bus person throughput = max peak load * weekday buses per hour (WMATA 2019)
- Vehicle person throughput = 1.18 pax per veh * veh per hour (Avg veh occupancy for work-based trips from Guidance for Comprehensive Transportation Review, DDOT, 2022)
- Max peak load excludes buses run by TheBus

Legend:

Bus Stop

Average Peak Direction Bus Person Throughput

RIGHT LANE RIGHT TURNS RIGHT TURNS ONLY

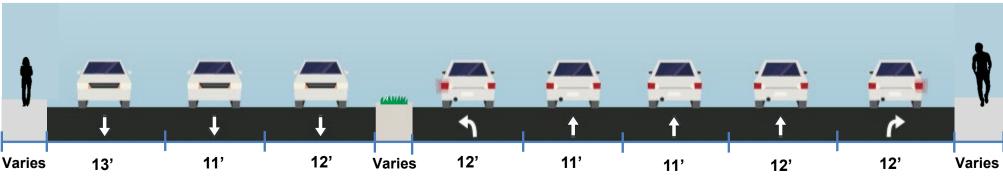
Bus Lane Signs (Ground Mounted, Overhead)

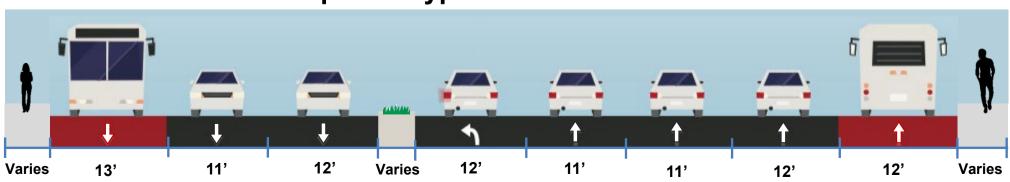
Concept Plan View



Note: All signs are not shown

Existing Typical Cross-Section





Queue Jump – Iverson Street at 23rd Parkway

Queue jumps allow buses to move ahead of other traffic stopped at red lights by giving bus operators special signals before the traffic light turns green. This allows bus transportation to be safer and more reliable.

Reasons for Queue Jumps:

- A queue jump reduces bus delays by an average of 12 seconds
- Complements reliability and on-time performance improvements from bus Silver Hill Road bus lane
- Provides operational benefits for Metrobus P12 between Suitland and Southern Avenue stations

Existing Intersection Characteristics:

- Bus Frequency: 5 buses per hour (once every 12 minutes)
- Nearside stop in right turn only lane
- Commercial and residential

Bus Ridership:

- While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day.
- WMATA expects ridership to continue to grow and as a result, has increased the frequency of service **Changes to Signal Operations:**

Queue jump locations have a separate bus-only signal

- Bus operators will look at this bus-only signal to know if they can proceed safely
- Drivers only follow the traffic signal (RED, YELLOW, GREEN) phases
- Drivers do not use the bus signal phases at an intersection
- Pedestrians use the pedestrian signal phases (WALK, DON'T WALK)

Legend:



Bus Stop



Bus Route

Phases of Bus-Only Queue Jump Signals

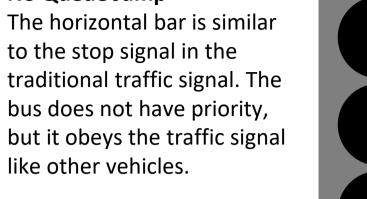
Horizontal Bar

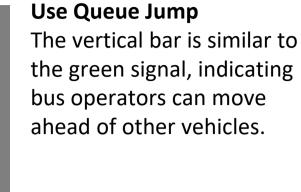




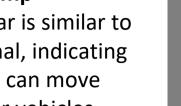
Flashing Triangle

No Queue Jump





Vertical Bar

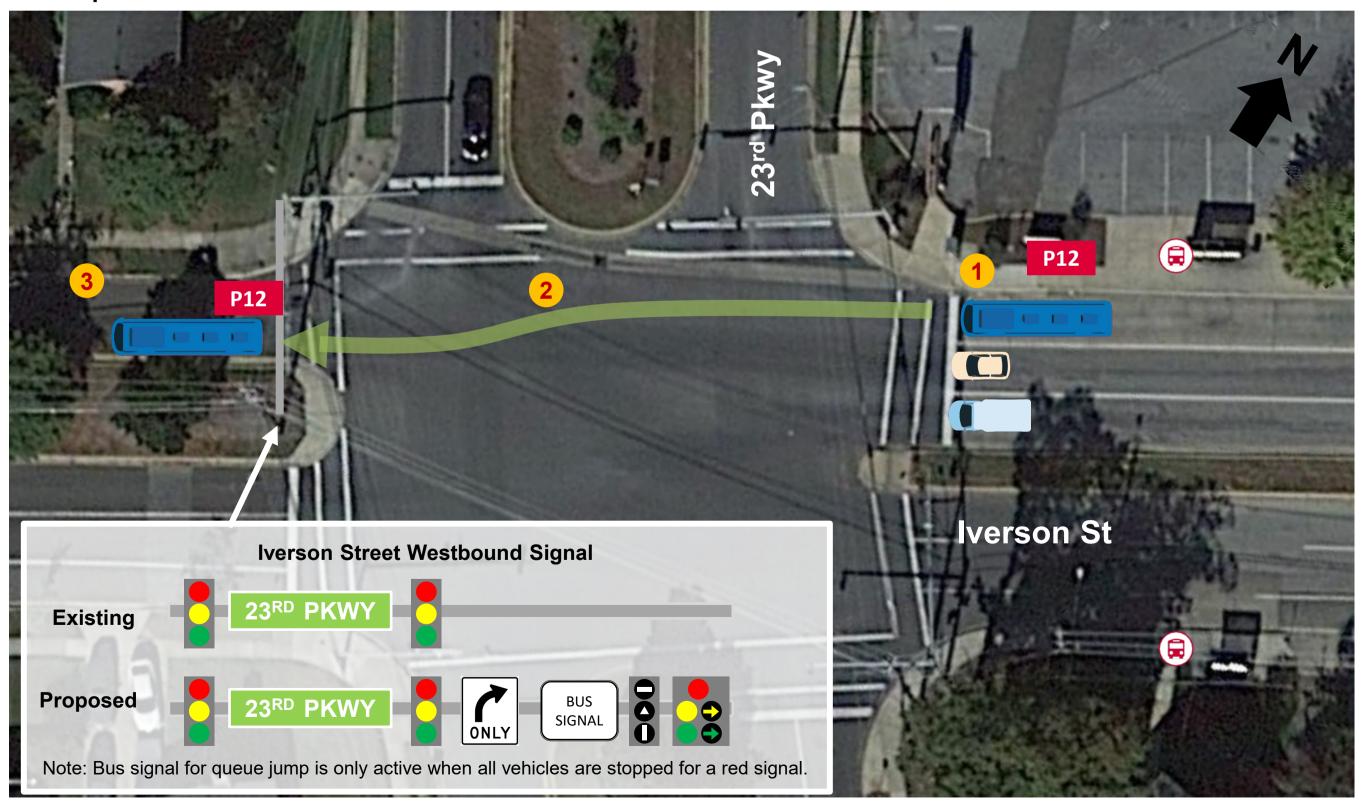




Clear Intersection

The flashing triangle tells the bus operator to clear the intersection. It is similar to a yellow signal.

Concept Plan View





Median Bus Lane Bypass - Marlboro Pike from Old Silver Hill Road to County Road

Reasons for Median Bus Lane Bypass:

- Provides bus with a dedicated lane in the median to bypass traffic and access the left turn lane
- Complements reliability and on-time performance improvements from Silver Hill Rd bus lane
- Provides operational benefits for Metrobus P12 and V12 en route to Addison Rd-Seat Pleasant Metrorail Station

Existing Segment Characteristics:

- Bus Frequency: 7 buses per hour (once every 8 minutes)
- Nearside stop in right turn-only lane
- Commercial and residential
- Turns prohibited in median

Bus Ridership:

- While bus ridership on the corridor is 14% lower than pre-COVID conditions, ridership is recovering, currently serving 12,812 Metrobus passengers per day.
- WMATA expects ridership to continue to grow and as a result, has increased the frequency of service

Changes to the Segment:

• The roadway will be resurfaced curb to curb and include a redpainted bus-only lane in the median

Changes to the Operations:

- The bus turns right from Old Silver Hill Road to Marlboro Pike
- The bus merges into the median bus lane bypass
- When the left turn lane is clear, the bus may enter. When a vehicle merges into the left turn lane, a bus must yield to that vehicle and proceed afterward

Updates by Stakeholders:

- Prince George's DPW&T is advancing the Marlboro Pike Pedestrian Safety Improvements Phase 3 CIP Project from Silver Hill Road to Forestville Road
- WMATA is coordinating with DPW&T to ensure this design aligns and transitions seamlessly with the Phase 3 project

Legend:



Bus Stop



Bus Route

Concept Plan View



Note: All signs are not shown

