

**BOARD OF SUPERVISORS
2017 TRANSPORTATION SUMMIT
INFORMATION ITEM**

SUBJECT: **Public and Private Infrastructure Improvements
Adjacent to the Dulles Metrorail Project**

ELECTION DISTRICTS: Algonkian, Broad Run, and Sterling

STAFF CONTACTS: Khattab Shammout, Transportation and Capital
Infrastructure
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PURPOSE: To provide the Board of Supervisors (Board) with information related to ongoing and planned infrastructure development adjacent to and in support of Metrorail service and recommend improvements that will further support and enhance Metrorail operations.

BACKGROUND: Construction of Phase 2 of the Silver Line Metrorail project commenced in the spring of 2014. As part of the Silver Line Phase 2 project, three Metrorail stations are being constructed within Loudoun County. Rail stations will be located at Washington Dulles International Airport, just north of the interchange of the Dulles Greenway and Route 606 (now known as the Loudoun Gateway Station), and just east of the interchange of the Dulles Greenway and Route 772 (now known as the Ashburn Station). The project is estimated by the Metropolitan Washington Airports Authority (MWAA) to start revenue service during the first quarter of calendar year 2020. In support of Metrorail operations and the private development proposed around the Loudoun Gateway and Ashburn stations, significant road and pedestrian infrastructure projects are in various phases of design and construction by Loudoun County, the Virginia Department of Transportation (VDOT), MWAA, and private developers. A brief description of each project is as follows:

Public Projects:

Croson Lane: The road extends between Old Ryan Road and the Ashburn Metrorail Station. It provides access to the Moorefield Station development, the south Ashburn Metrorail Station kiss & ride facility, and the parking garage from points south and west of the county. The road cross-section consists of a three-lane roadway with on street parking and the construction of twelve (12) foot wide sidewalks on both sides of the road.

Ashburn North Metrorail Commuter Parking Garage: This garage provides commuter parking to the north side of Ashburn Metrorail Station. It is located at the intersection of Metro Center Drive

and Gramercy Park Drive. When this project is completed, in summer 2018, it will provide a total of 1,434 parking spaces to commuters.

Ashburn South Metrorail Commuter Parking Garage: This garage provides commuter parking for the south side of the Ashburn Metrorail Station. It is located at the terminus of future Croson Lane near the south side of the Ashburn Metrorail Station. When this project is completed, in summer 2019, it will provide a total of 1,540 parking spaces to commuters.

Claiborne Parkway: The project completes the missing link in the roadway and provides additional north-south connectivity to the west of the Moorefield Station development. It extends between Croson Lane and Ryan Road for a total distance of 4,000 feet. The project includes the construction of a four-lane divided facility with 10-foot wide asphalt trail on the west side and 6-foot wide sidewalk on the east side. It is anticipated for completion fall 2018.

Metro Center Drive Connector Bridge: The project includes the construction of 2,400 foot of a two-lane undivided Metro Center Drive including a 10-foot wide asphalt trail on the north side. The project features the construction of a 400-foot bridge over the Dulles Greenway. It also includes the construction of an 800-foot section of Moorefield Boulevard under an agreement with Claude Moore Charitable Foundation

Moorefield Boulevard: The project widens the existing portion of Old Ryan Road from its future intersection with Moorefield Boulevard to Mooreview Parkway. Per the FY2018 adopted Capital Improvement Program (CIP), funding for Moorefield Boulevard is provided in FY2019.

Mooreview Parkway: The project extends Mooreview Parkway from its current terminus just south of Croson Lane to Old Ryan Road for a distance of 3,200 feet. The project includes the construction of a four-lane divided facility with a 10-foot wide asphalt trail on west side and a 5-foot wide sidewalk on east side. It is anticipated for completion in spring 2018.

Croson/Mooreview/Claude Moore Pedestrian Improvements: The project provides approximately 900 feet of 5-foot wide concrete sidewalk along the north side of Croson Lane between Quail Pond Place and Mooreview Parkway, approximately 1,600 feet of 10-foot wide asphalt trail along the west side of Mooreview Parkway between Croson Lane and Claude Moore Avenue, and approximately 300 feet of 5-foot wide concrete sidewalk along the north side of Claude Moore Avenue between Mooreview Parkway and the sidewalk at the Vantage Pointe Place cul-de-sac.

Croson Lane Pedestrian Improvements: The project provides approximately 2,400 feet of 10-foot wide asphalt trail along the south side of Croson Lane between Claiborne Parkway and Fairlawn Drive. The project also provides approximately 1,000 feet of 5-foot wide concrete sidewalk along the north side of Croson Lane between Mooreview Parkway and Old Ryan Road. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Wynridge Drive Pedestrian Improvements: The project provides approximately 2,900 feet of 10-

foot wide asphalt trail along the south side of Wynridge Drive and Claude Moore Avenue between Claiborne Parkway and Old Ryan Road. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Claude Moore Avenue Pedestrian Improvements: The project provides approximately 1,000 feet of 5-foot wide concrete sidewalk along the north side of Claude Moore Avenue between the existing sidewalk across from the Vantage Pointe Place cul-de-sac and Old Ryan Road. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Ashburn Village Blvd Pedestrian Improvements: The project provides approximately 2,100 feet of 10-foot wide asphalt trail along the east side of Ashburn Village Boulevard between Waxpool Road and Shellhorn Road. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Shellhorn Road Pedestrian Improvements: The project provides approximately 800 feet of 5-foot wide concrete sidewalk and approximately 1,800 feet of 10-foot wide asphalt trail along various segments of the south side of Shellhorn Road. Completion of these missing segments will result in continuous pedestrian facilities along the south side of Shellhorn Road between Ashburn Village Boulevard and the Loudoun County Parkway. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Loudoun Gateway Metrorail Commuter Parking Garage: This garage provides commuter parking for the Loudoun Gateway Metrorail Station. It is located on Lockridge Road just east of the Station. When completed in summer 2019, it will provide a total of 1,965 parking spaces to commuters.

Croson Lane Widening: The project widens existing Croson Lane from its current 2-lane half section configuration to its ultimate 4-lane divided configuration. The limits of the proposed widening are Claiborne Parkway and Old Ryan Road.

Prentice Drive: The project provides for the construction of approximately 8,600 feet of Prentice Drive between Shellhorn Road at its intersection with Devin Shafron Drive and existing Prentice Drive at its intersection with Lockridge Road. Prentice Drive will be a 4-lane divided roadway with pedestrian facilities on either side. The project includes the construction of an approximately 1,000-foot bridge over Broad Run. This project is currently in the design phase.

Lockridge Road West: The project provides for the construction of approximately 2,200 feet of Lockridge Road West between Prentice Drive and Waxpool Road. Lockridge Road West will be a 4-lane divided roadway with pedestrian facilities on either side.

Shellhorn Road: This project provides for the construction of approximately 8,000 feet of Shellhorn Road between existing Shellhorn Road at its intersection with Loudoun County Parkway and Lockridge Road. The project also realigns and widens existing Lockridge Road through MWAA property and connects to the Sterling Boulevard extension project.

Loudoun Gateway Metrorail Commuter Parking Garage Access Improvements: This project provides for short-term spot upgrades along Moran Road and Lockridge Road to accommodate Metrorail opening day traffic accessing the Loudoun Gateway Station. Improvements include the installation of a traffic signal at the intersection of Moran Road and Lockridge Road, the construction of left and right turn lanes along Lockridge Road into the Loudoun Gateway Metrorail Station and the construction of dual left and right turn lanes on northbound Old Ox Road (Route 606) and southbound Moran Road respectively. This project is being funded and constructed by MWAA as part of the Silver Line Metrorail Phase 2 project.

Old Ox Road (Route 606) Widening: This project provides for the widening of existing Old Ox Road (Route 606) between Evergreen Mills Road and the Dulles Greenway from its current 2-lane undivided configuration to a 4-lane divided configuration. The project also provides a connection from Old Ox Road to the Loudoun County Parkway. The construction of this project is being administered by VDOT.

Sterling Blvd Extension: This project provides for the extension of Sterling Boulevard from its current western terminus at Pacific Boulevard to Moran Road. The project is approximately 2,000 feet in length. The proposed roadway will be a 4-lane divided facility with 6-foot wide concrete sidewalk on the north side.

Route 606 Trail Extension: The project provides approximately 4,000 feet of 10-foot wide asphalt trail along the west side of Old Ox Road (Route 606) from the terminus of the trail being constructed by VDOT as part of its 606 widening project just south of the Greenway/Route 606 interchange to the Loudoun Gateway Metrorail Station. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Moran Road Pedestrian Improvements: The project provides approximately 1,300 feet of 10-foot wide asphalt trail along the south side of Moran Road between its connection to Sterling Boulevard Extension project and the Loudoun Gateway Metrorail Station. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Lockridge Road Pedestrian Improvements: The project provides approximately 2,000 feet of 10-foot wide asphalt trail along the west side of Lockridge Road between Prentice Drive and the Loudoun Gateway Metrorail Station. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Prentice Drive Pedestrian Improvements: The project provides approximately 5,000 feet of both 10-foot wide asphalt trail and 5-foot wide concrete sidewalk along the north and south side of Prentice Drive. Completion of these missing segments will result in continuous pedestrian facilities along both the north and south side of Prentice Drive between Pacific Boulevard and Lockridge Road. This project is part of the Metro Station Area Pedestrian Improvements CIP project.

Randolph Drive Realignment: This project realigns and extends Randolph Drive from its current terminus at Moran Road to the intersection of Moran Road and Old Ox Road (Route 606). Construction of this project is anticipated to occur in conjunction with the construction of Shellhorn Road. When complete, Randolph Drive will be a 4-lane divided facility within the project limits.

Private Sector Projects:

Vinegar Hill Drive: The project is being completed and managed by the Claude Moore Charitable Foundation. When completed, it will serve as a private road providing access to bus and emergency vehicles serving the south side of Ashburn Metro Station. The project also includes the construction of the primary stormwater collection system between the proposed Moorefield Development and the East Regional Pond. The project extends between the existing Moorefield Public Safety Center and Centergate Drive. The project is currently in construction and is anticipated for completion summer 2017.

Moorefield Station East Regional Pond: This project is being completed and managed by the Claude Moore Charitable Foundation. When completed in winter 2017, this project will provide storm water management for the Moorefield development and the Ashburn Metrorail Station. The project is located in the southern area of the Moorefield Development and is approximately 10 acres in size.

Moorefield Station Northern Roads: This project is being completed and managed by the Claude Moore Charitable Foundation. This project is comprised of the construction of Moorefield Boulevard between Old Ryan Road and Croson Lane (1,400 feet), Claude Moore Drive between Old Ryan Road and Croson Lane (800 feet) and Silver Train Street between Moorefield Boulevard and Vinegar Hill Road (700 feet). This project is anticipated to be completed in spring 2018 and will provide additional connectivity to Vinegar Hill Drive and the Ashburn Metrorail South parking garage.

Old Ryan Road: This project is being completed and managed by The Atapco. This project widens existing Old Ryan Road and replaces the sharp horizontal curve in Old Ryan Road near the Moorefield Public Safety Center with a tee-intersection with Moorefield Boulevard. The project extends between Mooreview Parkway and future Moorefield Boulevard (being constructed as part of Moorefield North Metro Roads) for a distance of approximately 4,600 feet. This project is anticipated to be completed in fall 2018.

Traffic signal, Shellhorn Road at Metro Center Drive: This project will be completed and managed by Comstock as part of the Loudoun Station development. The project entails the design and construction of a traffic signal at the intersection of Shellhorn Road and Metro Center Drive. Timing of this project is based on VDOT signal warrants being met.

Traffic signal, Shellhorn Road at Loudoun Station Drive: This project will be completed and managed by Comstock as part of the Loudoun Station development. The project entails the design and construction of a traffic signal at the intersection of Shellhorn Road and Loudoun Station Drive. Timing of this project is based on VDOT signal warrants being met.

Traffic signal, Shellhorn Road at Devin Shafron Drive: This project will be completed and managed by Comstock as part of the Loudoun Station development. The project entails the design and construction of a traffic signal at the intersection of Shellhorn Road and Devin Shafron Drive. Timing of this project is based on VDOT signal warrants being met.

Traffic signal, Mooreview Parkway at Moorefield Blvd: This project will be completed and managed by Claude Moore Charitable Foundation as part of the Moorefield Station development. The project entails the design and construction of a traffic signal at the intersection of Mooreview Parkway and Moorefield Boulevard. Timing of this project is based on VDOT signal warrants being met.

Traffic signal, Mooreview Parkway at Wynridge Drive: This project will be completed and managed by Claude Moore Charitable Foundation as part of the Moorefield Station development. The project entails the design and construction of a traffic signal at the intersection of Mooreview Parkway and Wynridge Drive/Claude Moore Avenue. Timing of this project is based on VDOT signal warrants being met.

Traffic signal, Mooreview Parkway at Croson Lane: This project will be completed and managed by Claude Moore Charitable Foundation as part of the Moorefield Station development. The project entails the design and construction of a traffic signal at the intersection of Mooreview Parkway and Croson Lane. Timing of this project is based on VDOT signal warrants being met.

Tables 1, 2, and 3 below summarize the status of projects at the Ashburn Metrorail Station when revenue service commences in the first quarter of CY 2020. Table 1 summarizes infrastructure projects that are currently in the design or construction phase and are expected to be complete at the time Silver Line Phase 2 revenue service commences. A map reflecting completed improvements at the time of Silver Line Phase 2 revenue service is included as Attachment 1.

Table 1: Ashburn Metrorail Station – Construction Projects Expected to be Completed by the time Silver Line Metrorail Revenue Service Commences

Project Name	From	To	Owner
Vinegar Hill Drive	Moorefield Safety Center	Centergate Drive	Claude Moore Charitable Foundation
East Regional Pond	N/A	N/A	Claude Moore Charitable Foundation
Croson Lane	Old Ryan Road	Ashburn Metrorail Station	Loudoun County
Moorefield North Metro Roads	N/A	N/A	Claude Moore Charitable Foundation
Mooreview Parkway	Croson Lane	Old Ryan Road	Loudoun County
Ashburn North Metrorail Parking Garage	N/A	N/A	Comstock
Old Ryan Road	Mooreview Parkway	Moorefield Boulevard	Claude Moore Charitable Foundation
Claiborne Parkway	Croson Lane	Ryan Road	Loudoun County
Metro Center Drive & Transit Connector Bridge	Croson Lane	Metro Center Drive	Loudoun County
Ashburn South Metrorail Parking Garage	N/A	N/A	Loudoun County
Croson/Mooreview/Claude Moore Pedestrian Improvements	Croson Lane	Claude Moore Avenue	Loudoun County

Table 2 summarizes infrastructure projects that are currently in the planning phase that are expected to be in active construction at the time Silver Line Phase 2 revenue service commences. A map reflecting improvements under construction at the time of Silver Line Phase 2 revenue service is included as Attachment 2.

Table 2: Ashburn Metrorail Station – Construction Projects Expected to be under Construction at Time Silver Line Metrorail Revenue Service Commences

Project Name	From	To	Owner
Moorefield Boulevard	Old Ryan Road	Mooreview Parkway	Loudoun County
Shellhorn Road / Metro Center Drive Traffic Signal	N/A	N/A	Comstock
Shellhorn Road / Loudoun Station Drive Traffic Signal	N/A	N/A	Comstock
Shellhorn Road / Devin Shafron Drive Traffic Signal	N/A	N/A	Comstock
Mooreview Parkway / Moorefield Boulevard Traffic Signal	N/A	N/A	Claude Moore Charitable Foundation
Mooreview Parkway / Wynridge Drive Traffic Signal	N/A	N/A	Claude Moore Charitable Foundation
Mooreview Parkway / Croson Lane Traffic Signal	N/A	N/A	Claude Moore Charitable Foundation
Croson Lane Pedestrian Improvements	Mooreview Parkway	Old Ryan Road	Loudoun County
Croson Lane Pedestrian Improvements	Claiborne Parkway	Fairlawn Drive	Loudoun County
Wynridge Drive Pedestrian Improvements	Claiborne Parkway	Old Ryan Road	Loudoun County
Claude Moore Pedestrian Improvements	Vantage Pointe Place	Old Ryan Road	Loudoun County
Ashburn Village Boulevard Pedestrian Improvements	Waxpool Road	Shellhorn Road	Loudoun County
Shellhorn Road Pedestrian Improvements	Ashburn Village Boulevard	Loudoun Station	Loudoun County
Shellhorn Road Pedestrian Improvements	Devin Shafron Drive	Loudoun County Parkway	Loudoun County

Table 3 summarizes infrastructure projects that are currently in the planning phase that are expected to be in design at the time Silver Line Phase 2 revenue service commences. A map reflecting projects under design at the time of Silver Line Phase 2 revenue service is included as Attachment 3.

Table 3: Ashburn Metrorail Station – Construction Projects Expected to be Under Design at Time Silver Line Metrorail Revenue Service Commences

Project Name	From	To	Owner
Croson Lane Widening	Claiborne Parkway	Old Ryan Road	Loudoun County
Prentice Drive	Shellhorn Road	Lockridge Road	Loudoun County
Lockridge Road West	Prentice Drive	Waxpool Road	Loudoun County
Shellhorn Road	Loudoun County Parkway	Lockridge Road	Loudoun County

Tables 4, 5, and 6 below summarize the status of projects at the Loudoun Gateway Metrorail Station when revenue service commences in the first quarter of CY 2020. Table 4 summarizes infrastructure projects that are currently in the design or construction phase and are expected to be complete at the time Silver Line Phase 2 revenue service commences. A map reflecting completed improvements at the time of Silver Line Phase 2 revenue service is included as Attachment 4.

Table 4: Loudoun Gateway Metrorail Station – Construction Projects Expected to be Complete at Time Silver Line Metrorail Revenue Service Commences

Project Name	From	To	Owner
Loudoun Gateway Metrorail Parking Garage	N/A	N/A	Loudoun County
Loudoun Gateway Station Access Improvements	Loudoun Gateway Station	Route 606	Metropolitan Washington Airports Authority
Route 606 Widening	Loudoun County Parkway	Dulles Greenway	Virginia Department of Transportation

Table 5 summarizes infrastructure projects that are currently in the planning phase that are expected to be in active construction at the time Silver Line Phase 2 revenue service commences. A map reflecting improvements under construction at the time of Silver Line Phase 2 revenue service is included as Attachment 5.

Table 5: Loudoun Gateway Metrorail Station – Construction Projects Expected to be Under Construction at Time Silver Line Metrorail Revenue Service Commences

Project Name	From	To	Owner
Sterling Boulevard Extended	Pacific Boulevard	Moran Road	Loudoun County

Table 6 summarizes infrastructure projects that are currently in the planning phase that are expected to be in design at the time Silver Line Phase 2 revenue service commences. A map reflecting all projects under design at the time of Silver Line Phase 2 revenue service is included as Attachment 6.

Table 6: Loudoun Gateway Metrorail Station – Construction Projects Expected to be Under Design at Time Silver Line Metrorail Revenue Service Commences

Project Name	From	To	Owner
Route 606 Pedestrian Improvements	Dulles Greenway	Loudoun Gateway Station	Loudoun County
Moran Road Pedestrian Improvements	Sterling Boulevard Extended	Loudoun Gateway Station	Loudoun County
Lockridge Road Pedestrian Improvements	Loudoun Gateway Station	Prentice Drive	Loudoun County
Prentice Drive Pedestrian Improvements	Lockridge Road	Pacific Boulevard	Loudoun County
Prentice Drive	Shellhorn Road	Lockridge Road	Loudoun County
Lockridge Road Widening	Prentice Drive	Moran Road	Loudoun County
Shellhorn Road	Loudoun County Parkway	Lockridge Road	Loudoun County
Randolph Drive Realignment	Route 606	Sterling Boulevard Extended	Loudoun County

ISSUES: Based on a review of the transportation infrastructure expected to be in place at the time the Silver Line Phase 2 revenue service commences, staff has identified the following issues:

Traffic Signals: The design and construction of the six (6) planned traffic signals on Shellhorn Road and Mooreview Parkway are the responsibility of Comstock and Claude Moore Charitable Foundation respectively as required by their proffers. In these situations when the responsibility of project delivery is other than the County, the County does not control the timing of delivery.

Moorefield Boulevard: Moorefield Boulevard provides access to the Ashburn Station on the west side of the Dulles Greenway. At opening date, this access would have been completed to a full section except for the portion between Mooreview Parkway and the future intersection with Old Ryan Road. This portion of the roadway is currently in the CIP to be fully funded in FY 2019. The construction completion of this portion is difficult to achieve by opening date if the project design is not initiated prior to the current funding of FY2019. Initiating the design of this project ahead of the current funding date will require the advancement of additional funds estimated at \$1 million which is currently not available in the budget.

Bicycle and Pedestrian Access from area south of Greenway: The trail extension project on Route 606 will connect the northern most terminus of the VDOT trail which is part of the Route 606 project with the Loudoun Gateway Station. This project is currently not funded until FY 2022. The advancement of this project ahead of FY 2022 would require an additional \$5.0 million that are currently not available in the budget.

Based on expected infrastructure in place at time Silver Line Phase 2 revenue service commencement, no updated comprehensive study of the 2020 overall traffic operations in the vicinity of the future Metrorail stations has been undertaken to date.

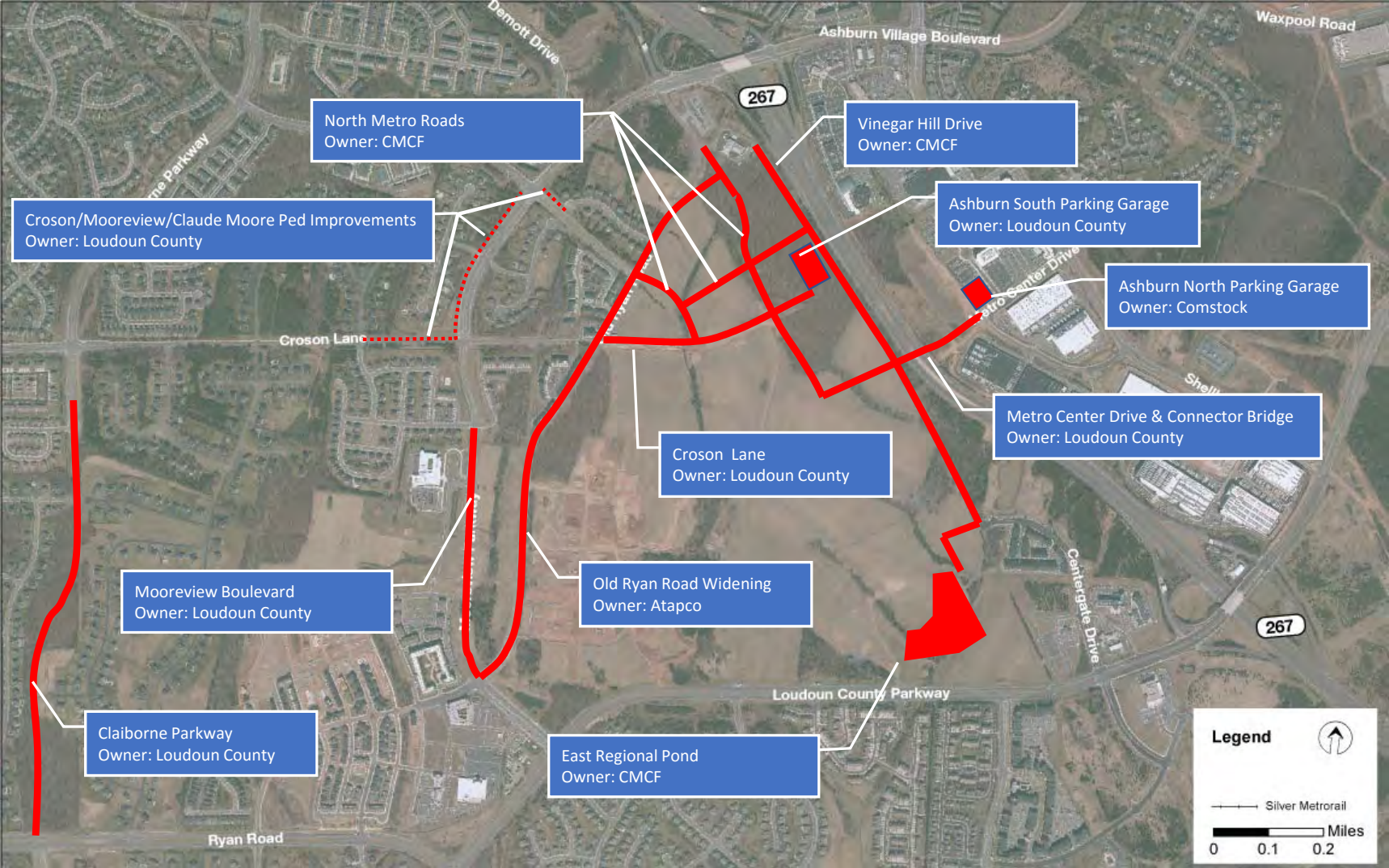
FISCAL IMPACT: The Adopted FY 2017 – FY 2022 CIP includes \$5.7 million in FY 2019 and \$5.4 million in FY 2020 for funding many of the metro station area pedestrian improvements projects. In addition, \$4.6 million is included in FY 2019 for the design and construction of the Moorefield Boulevard project (Mooreview Parkway to Old Ryan Road in Moorefield Station).

STAFF RECOMMENDATIONS: There are no recommendations associated with this item. It is for information only.

ATTACHMENTS:

1. Ashburn Station – Map of Completed Projects at time of Silver Line Revenue Service
2. Ashburn Station – Map of Projects under construction at time of Silver Line Revenue Service
3. Ashburn Station – Map of Projects under design at time of Silver Line Revenue Service
4. Loudoun Gateway Station – Map of Completed Projects at time of Silver Line Revenue Service
5. Loudoun Gateway Station – Map of Projects under construction at time of Silver Line Revenue Service
6. Loudoun Gateway Station – Map of Projects under design at time of Silver Line Revenue Service
7. Ashburn Station – Map of Projects Recommended for Acceleration
8. Loudoun Gateway Station – Map of Projects Recommended for Acceleration

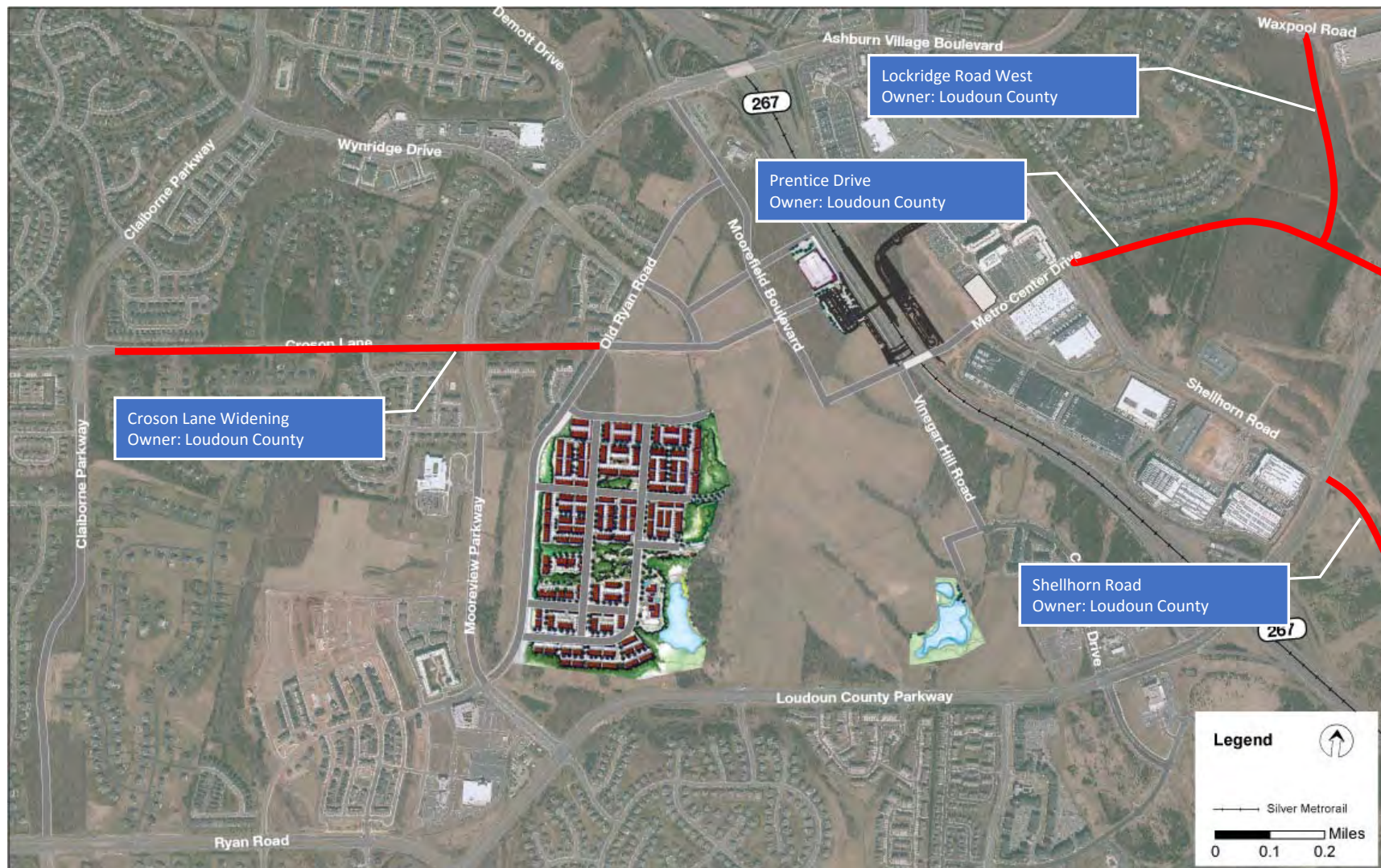
Ashburn Station – Map of Completed Projects at time of Silver Line Revenue Service



Ashburn Station – Map of Projects under construction at time of Silver Line Revenue Service



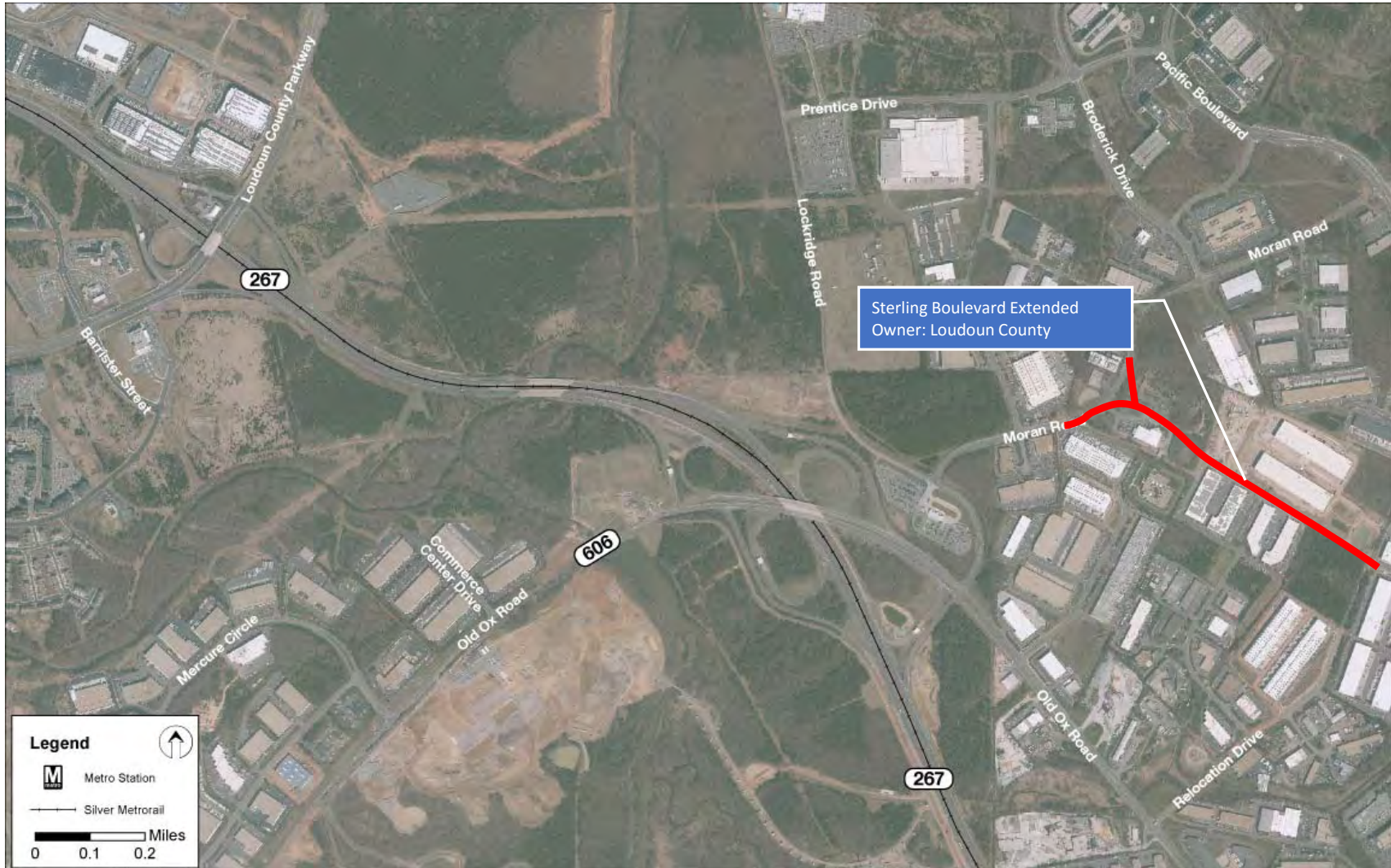
Ashburn Station – Map of Projects under design at time of Silver Line Revenue Service



Loudoun Gateway Station – Map of Completed Projects at time of Silver Line Revenue Service



Loudoun Gateway Station – Map of Projects under construction at time of Silver Line Revenue Service



Loudoun Gateway Station – Map of Projects under design at time of Silver Line Revenue Service



Ashburn Station - Map of Projects Recommended for Acceleration



Loudoun Gateway Station – Map of Projects Recommended for Acceleration

