Steering Committee Meeting

Presented to
Montgomery County Department of Transportation

Presented by
Dan Goldfarb, P.E.
Chris Conklin, P.E.
Vanasse Hangen Brustlin, Inc.

November 19, 2013

Presentation Overview

- Review Project Status
- Present Integrated Service Plan Concepts
  - Veirs Mill Road/University Blvd/Georgia Avenue (MD 586/MD 193/MD 97)
  - New Hampshire Avenue (MD 650)
  - Colesville Road (US 29)
- Feedback

Study Team Activities

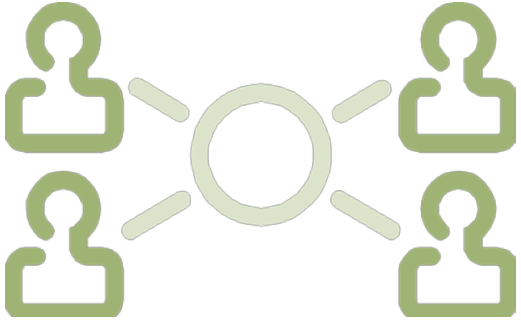
- Reviewed Previous Reports
- Compiled Existing Conditions Data
- Provided Comment on the Countywide Transit Corridor Functional Master Plan Draft
- Developed System Cost Estimate
- Developed Service Integration Concepts
- Working on Developing Corridor Specific Service Plans
- Accepting the Countywide Transit Corridor Functional Master Plan Infrastructure

Linked System Overlay Concepts

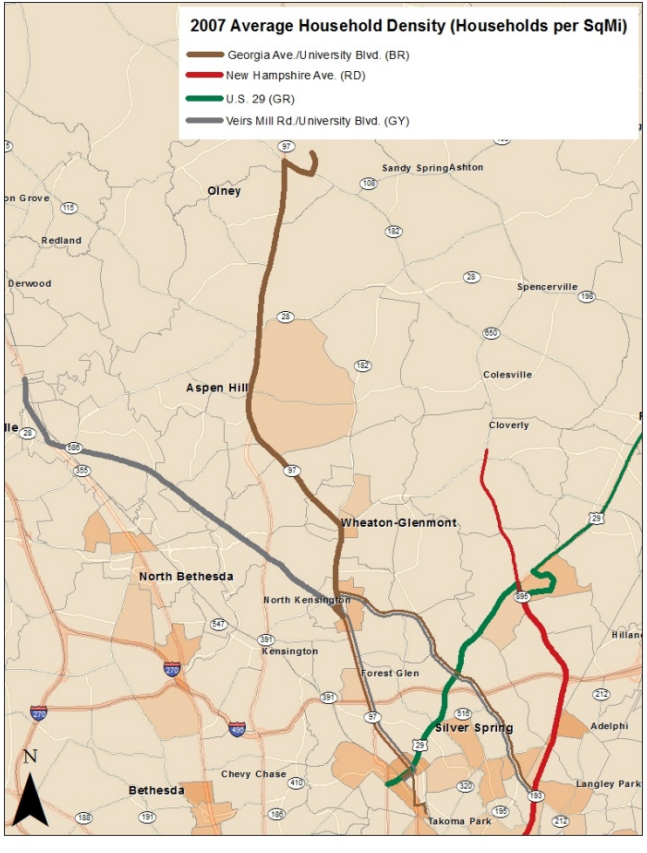
- Veirs Mill Road (MD 586)
- University Blvd. (MD 193)
- Georgia Avenue (MD 97)
- New Hampshire Avenue (MD 650)
- Colesville Road (US 29)
- Randolph Road /North Bethesda Transitway
- Rockville Pike (MD 355) North & South

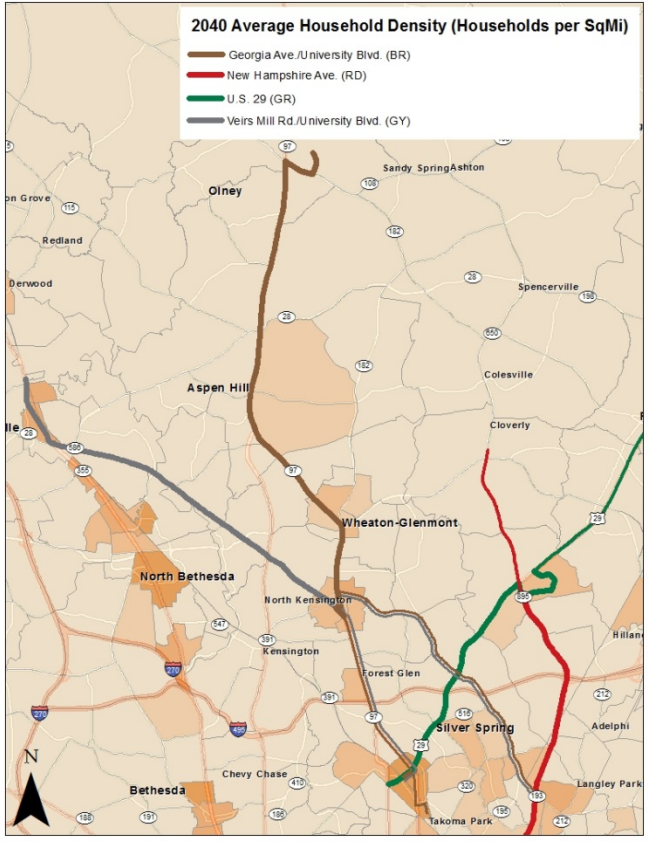
Connectivity

- Focus of Service and Integration Study
  - Activity Centers
  - Transfer Points
  - Multimodal Opportunities and Connections

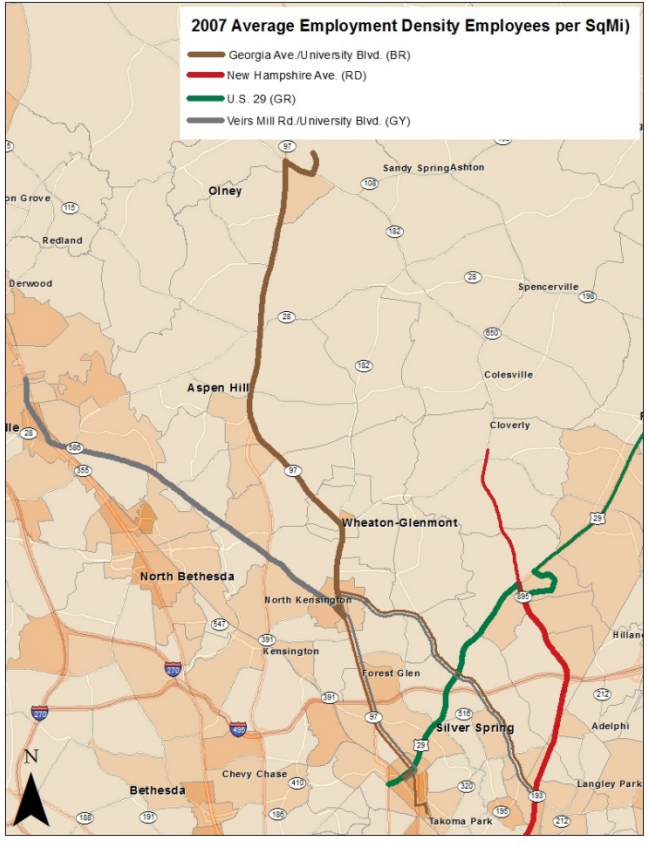


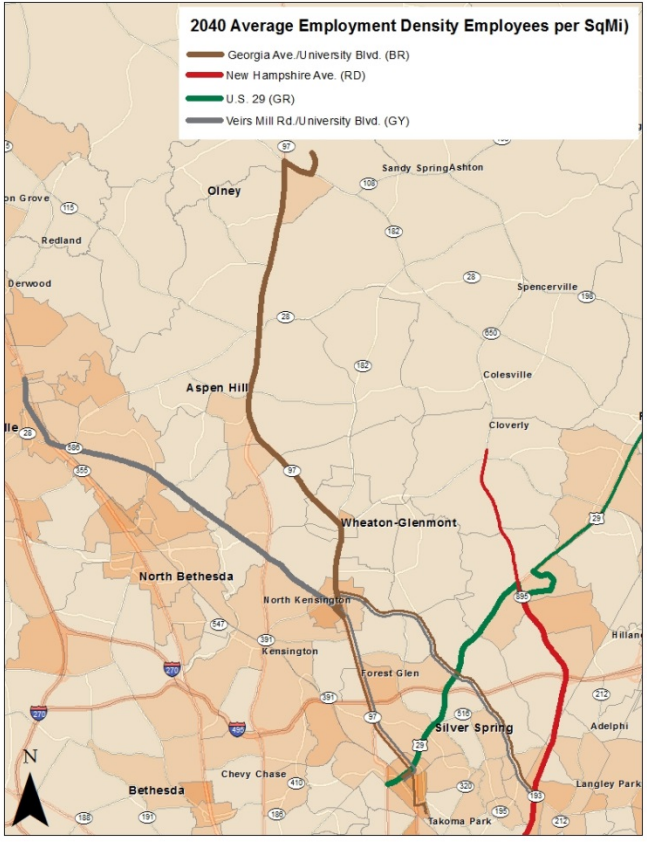
Land Use - Production Side





Land Use – Attraction Side





Busway Treatments

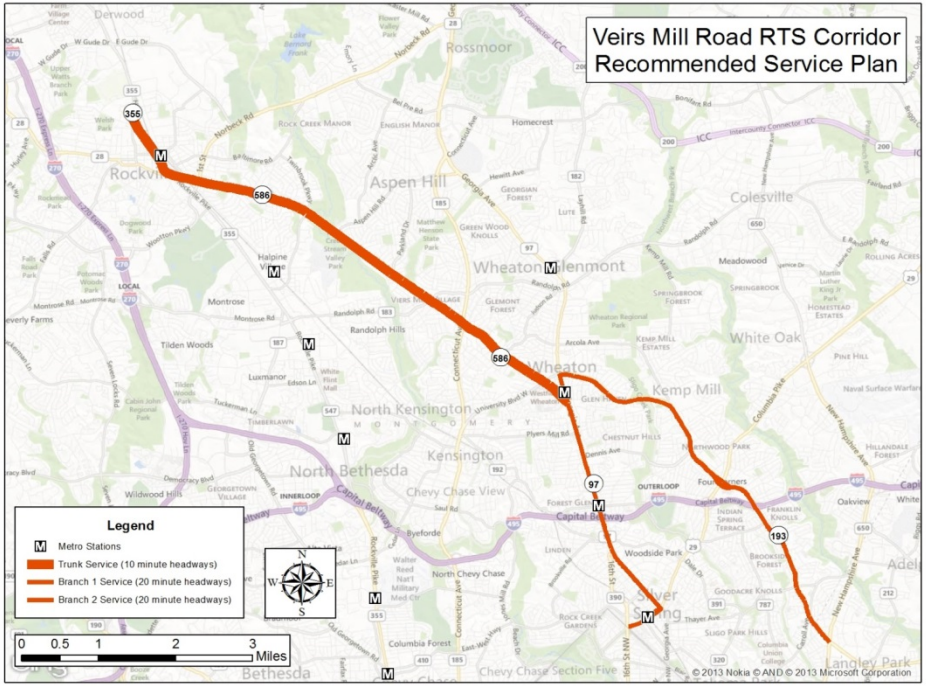
- Assumption from Countywide Transit Corridors Functional Master Plan (Draft)
- Based on Proposed Treatment
- Service Plan Concepts Flexible

RTS Route Veirs Mill Road/University Boulevard/ Georgia Avenue (MD 586/MD 193/MD 97)

SERVICE PLANNING CONCEPTS

Veirs Mill/University Blvd Service Plan

- Provide Faster East-West Transit Options
- Key Connections
  - Montgomery College
  - Rockville
  - Wheaton
  - Silver Spring
  - Takoma/Langley Park
- Diverse Land Use
- Stable Neighborhoods
- Developing Commercial Centers

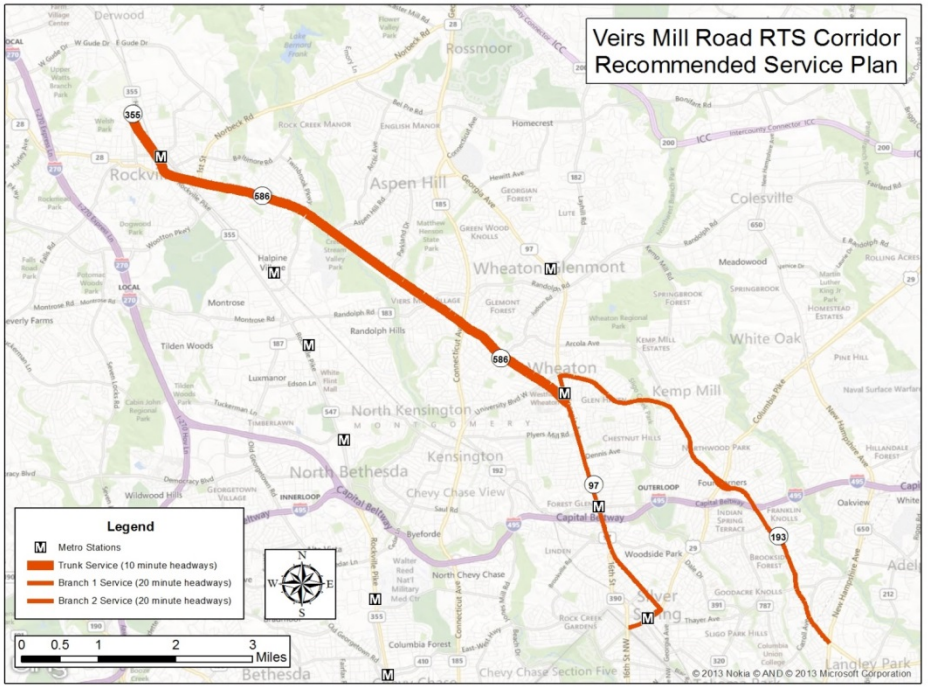


Veirs Mill/University Blvd Service Plan

Route Structure

- Trunk Portion Montgomery College to Wheaton (6.7 miles)
- Every Other Trip Silver Spring (3.7 miles) or Takoma/Langley Park (5.9 miles)

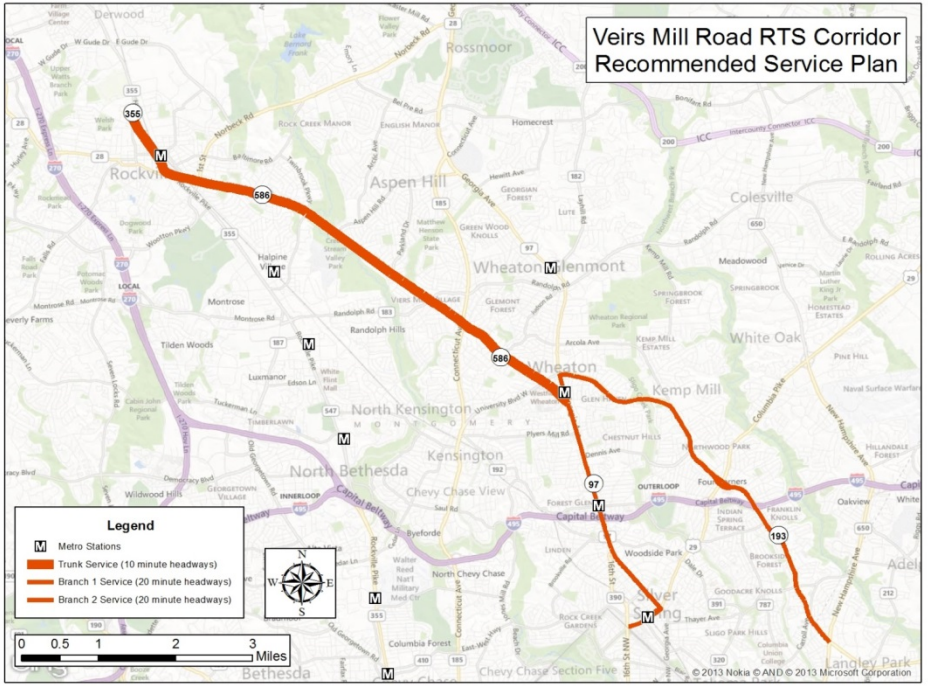
Service	Headway (minutes)			Speed (mph)		
	AM	Off-Peak	PM	AM	Off-Peak	PM
Existing[1]	10	15	9	14.0	13.3	12.3
RTS[2,3,4]	10	10	10	18.0	20.0	18.0
Difference	--	5	---	4.0	6.7	5.7
Percent Travel Time Savings	--	--	--	29%	50%	46%

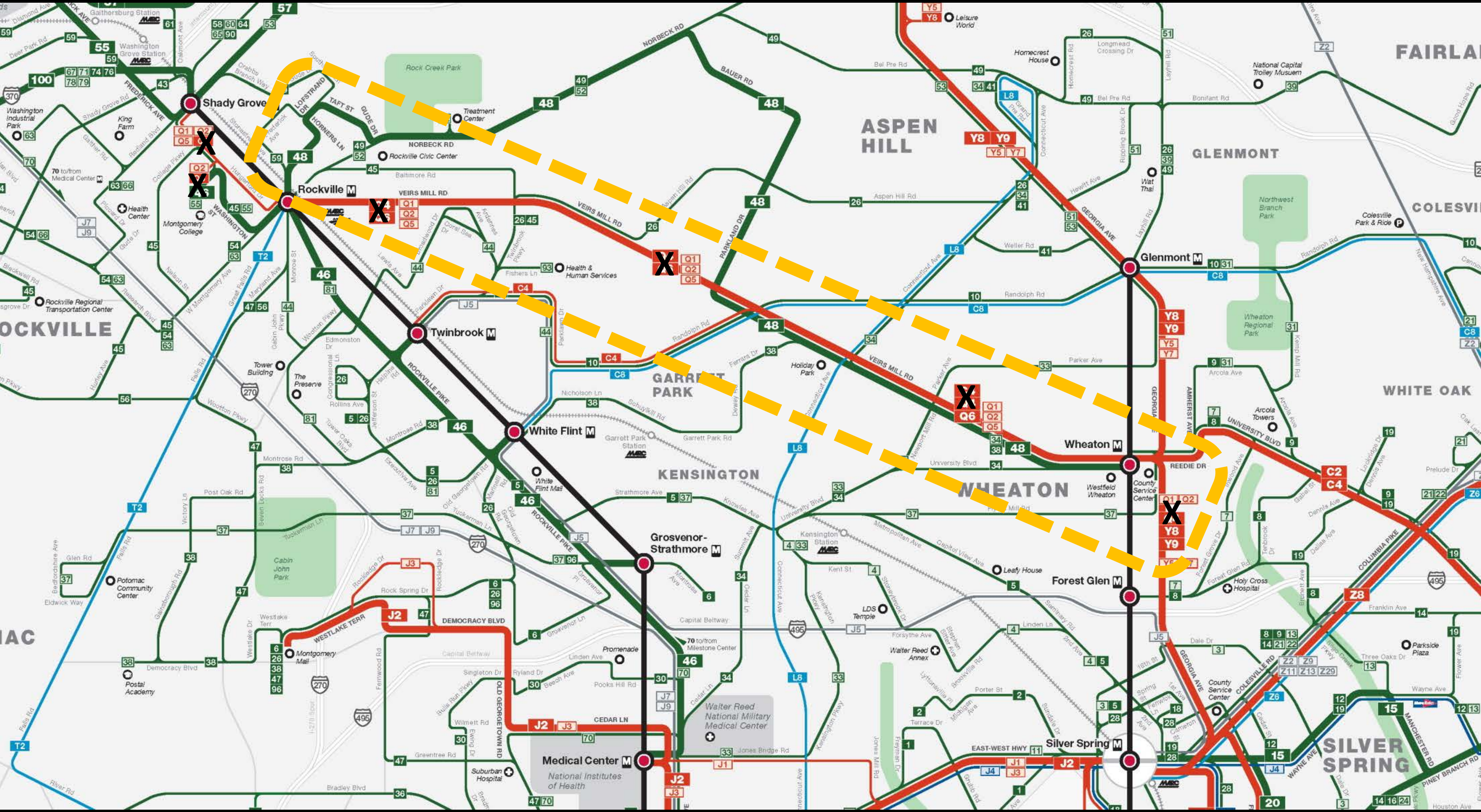


Veirs Mill/University Blvd Service Plan

Modifications to Local Service

- Metrobus Route Q2 would serve as the local option between Montgomery College and Silver Spring.
- Metrobus Routes Q4, Q5 and Q6 would be modified in conjunction with MD 355 Corridor.
- Metrobus Routes C2 and C4 would continue to operate as they do today and provide local service between Wheaton and Takoma/Langley Park.
- Metrobus Route C4 and RideOn Route 26 would use the median busway along Veirs Mill Road.




Shady Grove
Rockville
Twinbrook
White Flint
Grosvenor-Strathmore
Medical Center
National Institutes of Health
Glenmont
Wheaton
Forest Glen
Silver Spring
ROCKVILLE
ASPEN HILL
GLENMONT
COLESVILLE
WHITE OAK
GARRETT PARK
KENSINGTON
WHEATON
SILVER SPRING
FAIRLAND
VEIRS MILL RD
NORBECK RD
GEORGIA AVE
UNIVERSITY BLVD
ROCKVILLE PIKE
DEMOCRACY BLVD
CEDAR LN
WESTLAKE TERR
COLUMBIA PIKE
COLESVILLE RD
EAST-WEST HWY
REEDIE DR
Rock Creek Park
Cabin John Park
Northwest Branch Park
Wheaton Regional Park
Walter Reed National Military Medical Center
Rockville Civic Center
Montgomery College
Montgomery Mall
Westfield Wheaton
County Service Center
Holy Cross Hospital
Kensington Station
Garrett Park Station
Q1
Q2
Q5
Q6
Y5
Y7
Y8
Y9
C2
C4
C8
J2
J3
J5
L8
T2
Z8
46
48
X

Veirs Mill/University Blvd Service Plan

Recommended Phasing

Phase I

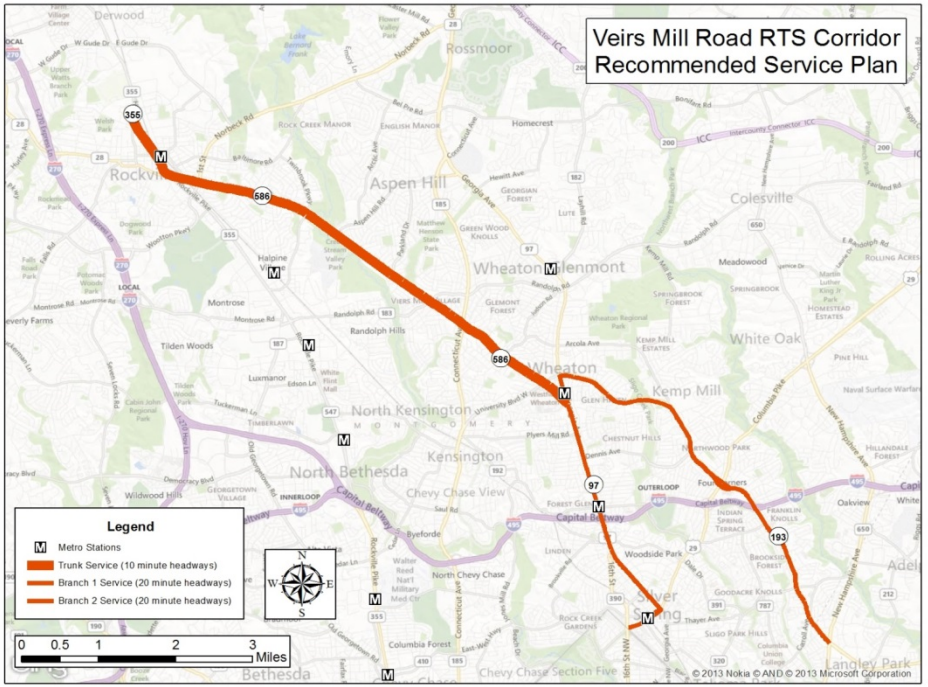
Enhanced limited stop bus service (e.g., Metro Extra) along the Veirs Mill Road Corridor between Montgomery College and Wheaton with service at 10-minute headways.

Phase II

All-day RTS service utilizing the planned busway infrastructure between Montgomery College and Wheaton. The service will be provided with service at 7.5-minute headways. Service to Silver Spring and Takoma/Langley Park would be offered once each corridor's improvements are completed.

Phase III

As ridership increases and demand warrants, headways will be increased to accommodate the level of demand and service will be all-day.

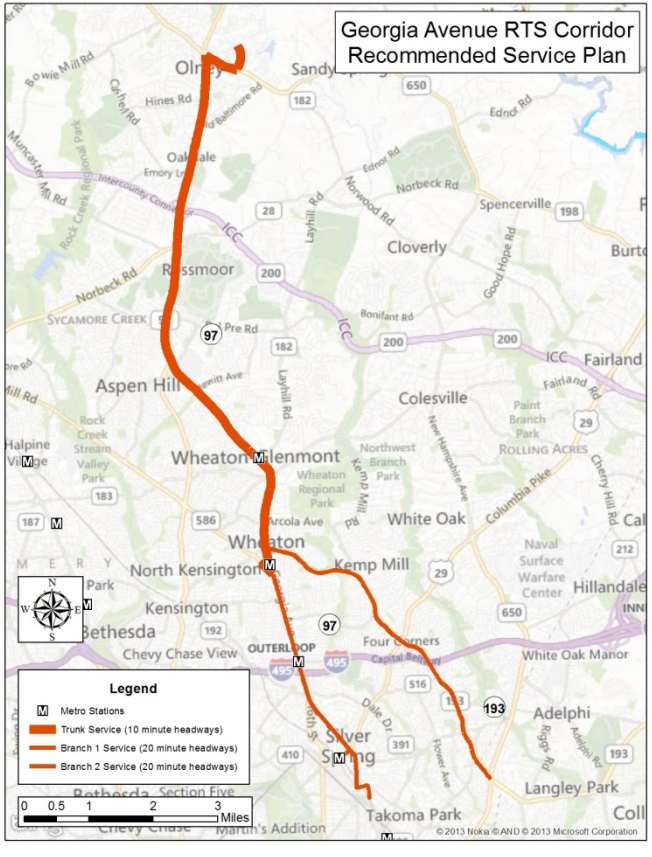


RTS Route Georgia Avenue/University Boulevard (MD 97/MD 193)

SERVICE PLANNING CONCEPTS

Georgia Avenue/University Blvd Service Plan

- Provide Faster Transit Option for Commuters from Olney to Wheaton
- Key Connections
  - Olney
  - Aspen Hill
  - Glenmont
  - Wheaton
  - Silver Spring
  - Takoma/Langley Park
- Connecting Developing Commercial Centers
- Multimodal Transit Connection

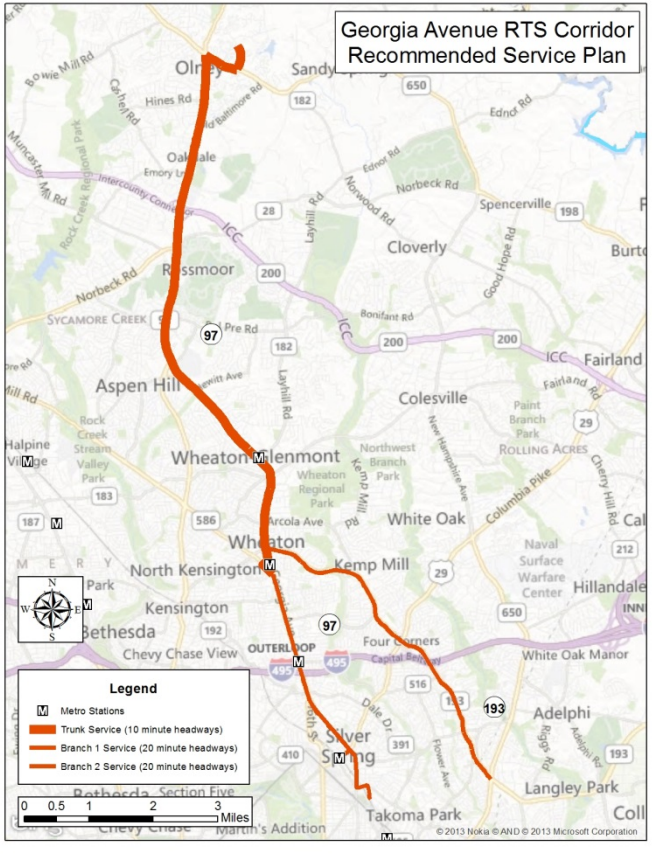


Georgia Avenue/University Blvd Service Plan

Route Structure

- Trunk Route Between Olney and Wheaton (9.6 miles)
- Branch to Silver Spring (3.9 miles)
- Branch to Takoma-Langley (5.9 miles).
- Every Other Trip to Silver Spring or Takoma-Langley

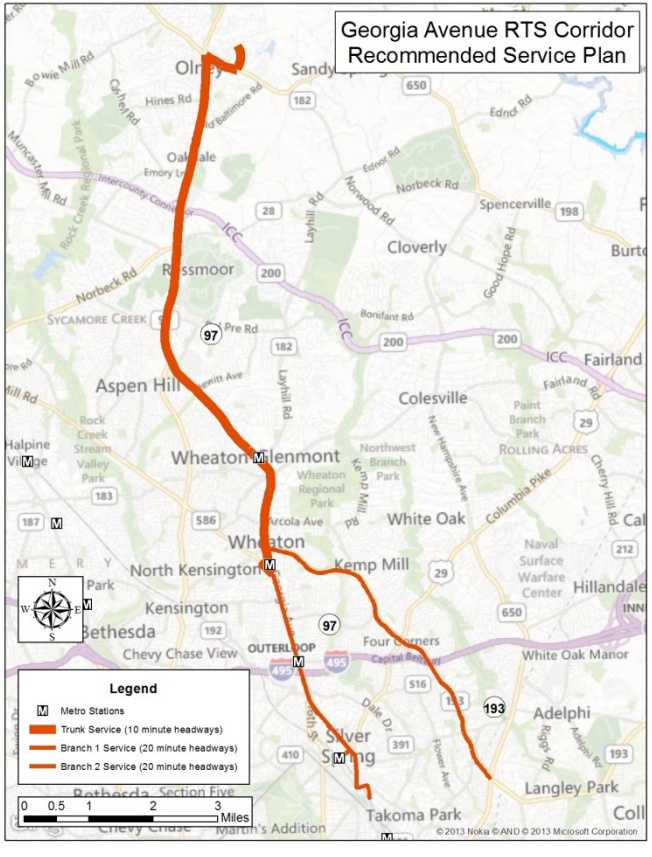
Service	Headway (minutes)			Speed (mph)		
	AM	Off-Peak	PM	AM	Off-Peak	PM
Existing[1]	15	20	15	15.6	14.2	13.1
RTS[2,3,4]	10	10	10	23.0	25.0	23.0
Difference	5	5	5	7.4	10.8	9.9
Percent Travel Time Savings	--	--	--	47%	76%	76%

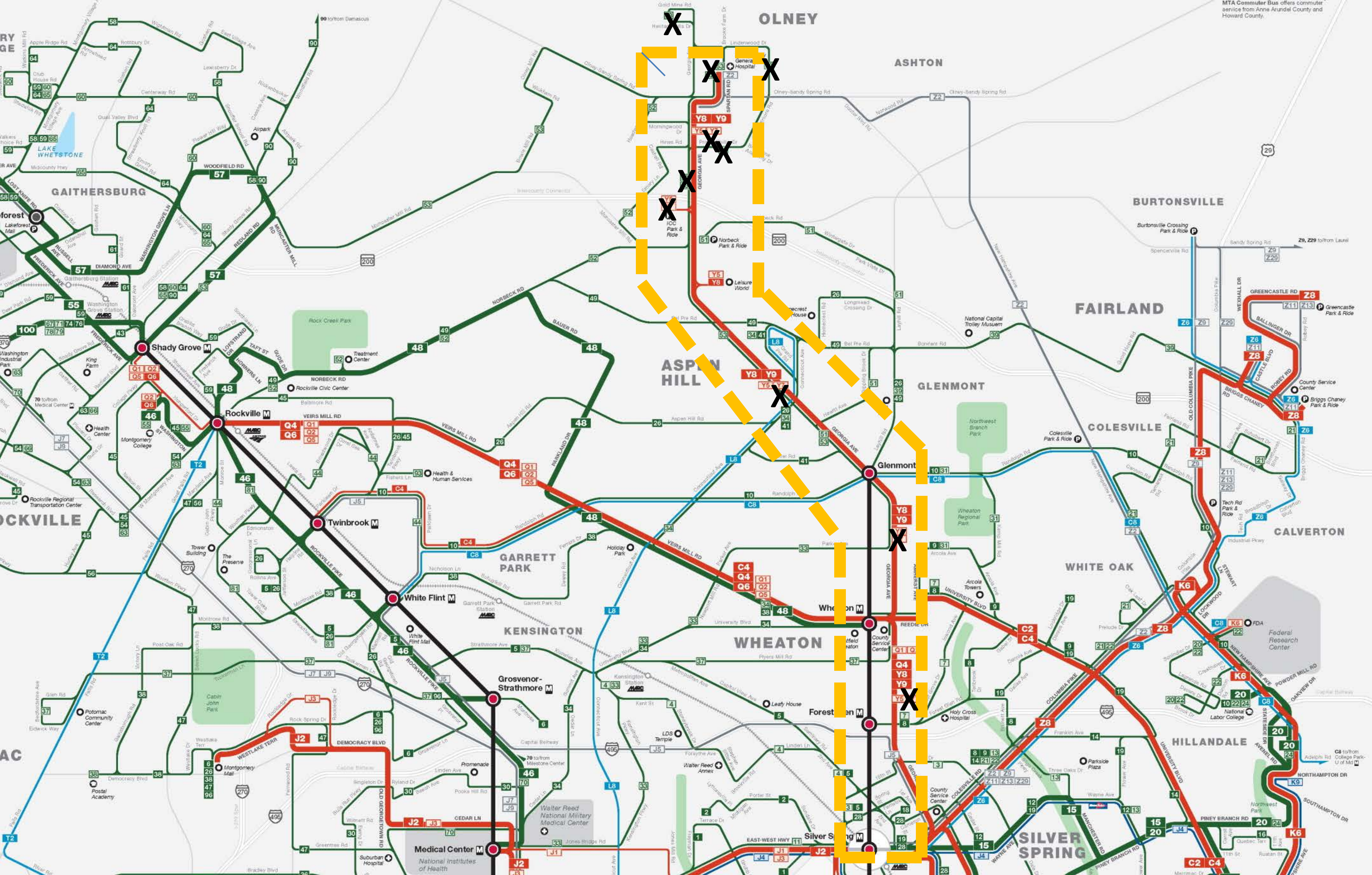


Georgia Avenue/University Blvd Service Plan

Modifications to Local Service

- Metrobus Routes Y5 and Y7 would be modified.
- Metrobus Routes Y8 and Y9 would be expanded to cover peak periods and would take advantage of the proposed RTS infrastructure curb lanes on Georgia Avenue.
- RideOn Route 53 would be truncated at Olney.
- RideOn Route 52 would connect to Georgia Avenue RTS at Norbeck P&R and Hines Road, but discontinue service on Georgia Avenue.





OLNEY
ASHTON
BURTONSVILLE
FAIRLAND
GAITHERSBURG
ASPEN HILL
GLENMONT
COLESVILLE
CALVERTON
WHITE OAK
GARRETT PARK
KENSINGTON
WHEATON
HILLANDALE
SILVER SPRING
Shady Grove
Rockville
Twinbrook
White Flint
Grosvenor-Strathmore
Medical Center
Glenmont
Forest Glen
Silver Spring
LAKE WHETSTONE
Rock Creek Park
Northwest Branch Park
Wheaton Regional Park
Cabin John Park
Federal Research Center
Walter Reed National Military Medical Center
National Institutes of Health
MTA Commuter Bus offers commuter service from Anne Arundel County and Howard County.

Georgia Avenue/University Blvd Service Plan

Recommended Phasing

Phase I

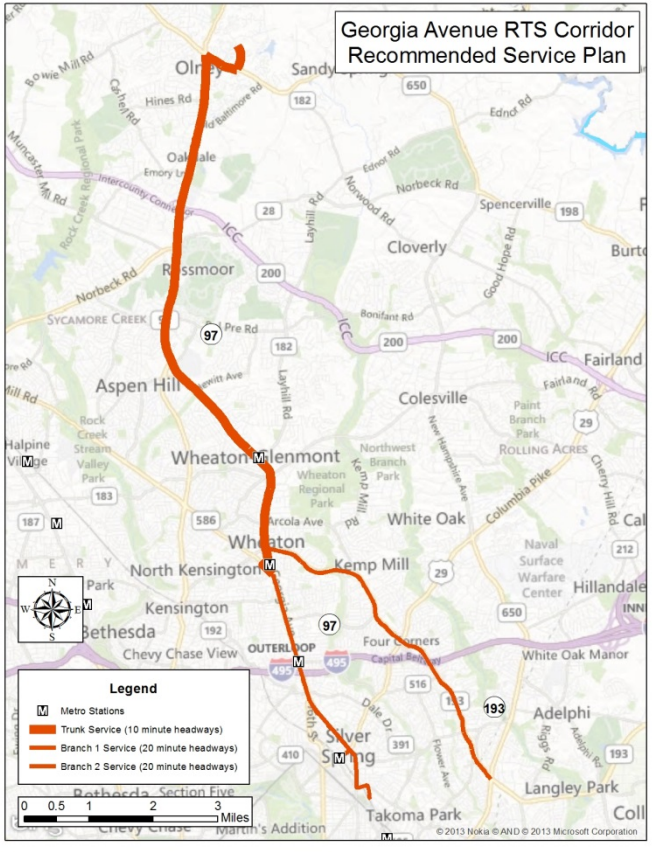
Enhanced limited stop bus service (i.e., Metro Extra) along the Georgia Avenue Corridor between Olney and Wheaton with peak period service at 10 minute headways.

Phase II

Peak period RTS service utilizing peak-direction one-lane median busway with 10-minute headways.

Phase III

As ridership increases and demand warrants, headways will be increased to accommodate the level of demand. According to the ridership projections in the CTCFMP, peak demand in the future would warrant five minute headways in the peak period and eight minute headways in the mid-day.

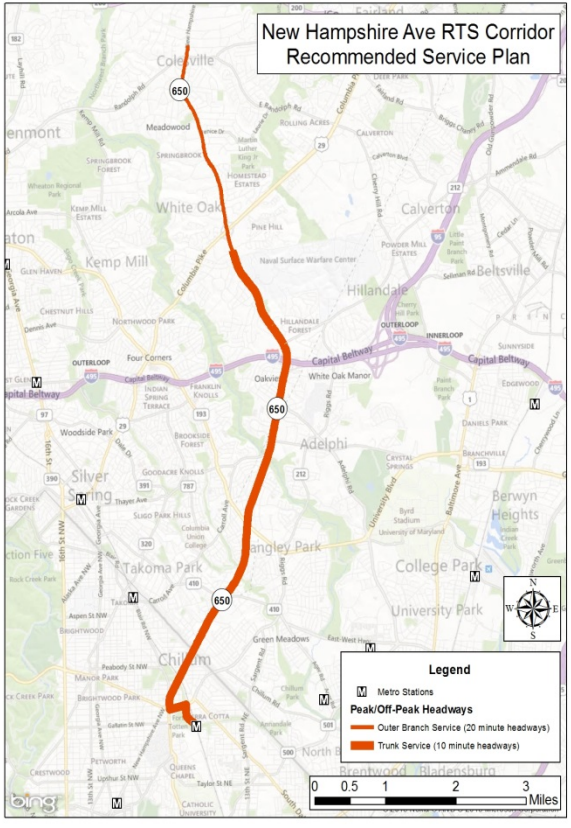


RTS Route New Hampshire Avenue (MD 650)

SERVICE PLANNING CONCEPTS

New Hampshire Avenue Service Plan

- Provide Faster Transit Option for Commuters to Takoma/Langley Park and Fort Totten
- Key Connections
  - Colesville PNR/Randolph Road
  - White Oak
  - Hillandale
  - Takoma/Langley Park
  - Fort Totten
- Access to Developing Areas of White Oak
- Multimodal Transit Connection



New Hampshire Avenue Service Plan

Route Structure

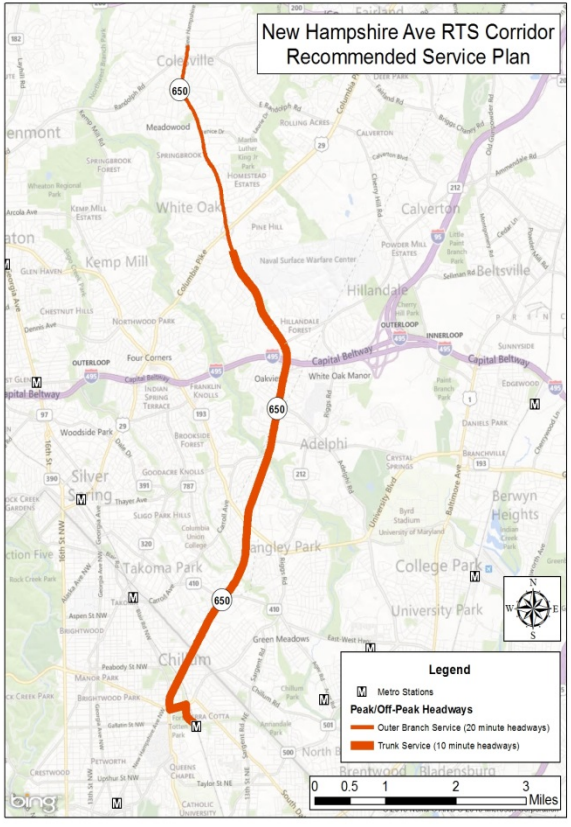
- Trunk Between Fort Totten and White Oak (5.8 miles).
- During Peak Period Continue Service to the Colesville PNR (2.6 miles)
- During Off-Peak Period Alternating Service to Colesville PNR (2.6 miles)

Service	Headway (minutes)			Speed (mph)		
	AM	Off-Peak	PM	AM	Off-Peak	PM
Existing[1]	10	18	10	13.8	15.3	13.4
RTS[2,3,4]	10	10	10	15.0	18.0	15.0
Difference	6	10	6	1.2	2.7	1.6
Percent Travel Time Savings	--	--	--	9%	18%	12%

New Hampshire Avenue Service Plan

Modifications to Local Service

- Metrobus Routes K6 and Z2 will provide local service along the corridor.
- MetroExtra Route K9 will be replaced by RTS service.



New Hampshire Avenue Service Plan

Recommended Phasing

Phase I

Enhanced limited stop bus service between Fort Totten and the White Oak Transit Center with peak-period service at 10-minute headways.

Phase II

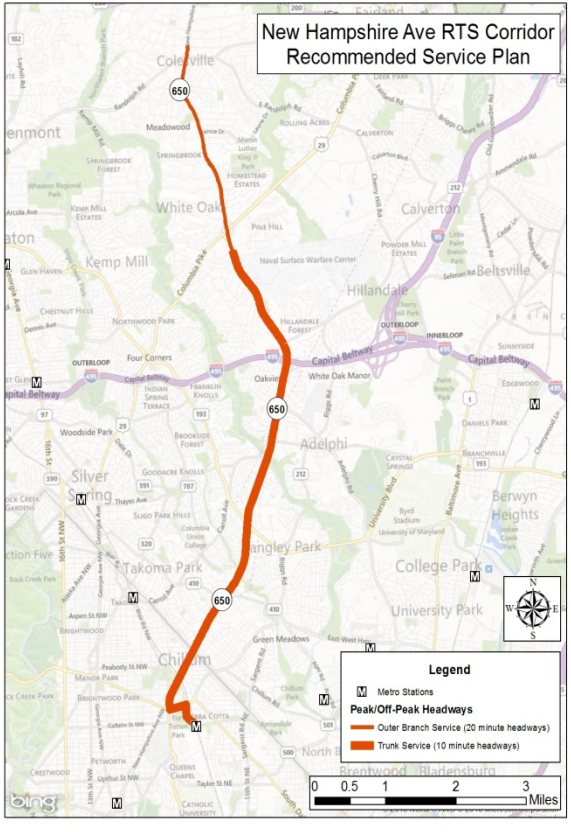
Enhanced limited stop bus service between Fort Totten and the White Oak Transit Center with peak-period service at 10-minute headways and off-peak service at 15 minute headways. Service between the White Oak Transit Center and Colesville Park-and-Ride will be provided during peak periods with 15-minute headways.

Phase III

All-day RTS service utilizing the median busway between Fort Totten and the White Oak Transit Center with 10-minute headways. Service between the White Oak Transit Center and Colesville Park-and-Ride will be provided with 10-minute headways during peak periods and 15-minute headways during off-peak periods.

Phase IV

As ridership increases and demand warrants, headways will be increased to accommodate the level of demand. According to the ridership projections in the CTCFMP, peak demand in the future would warrant four minute headways in the peak period and six minute headways in off-peak periods.

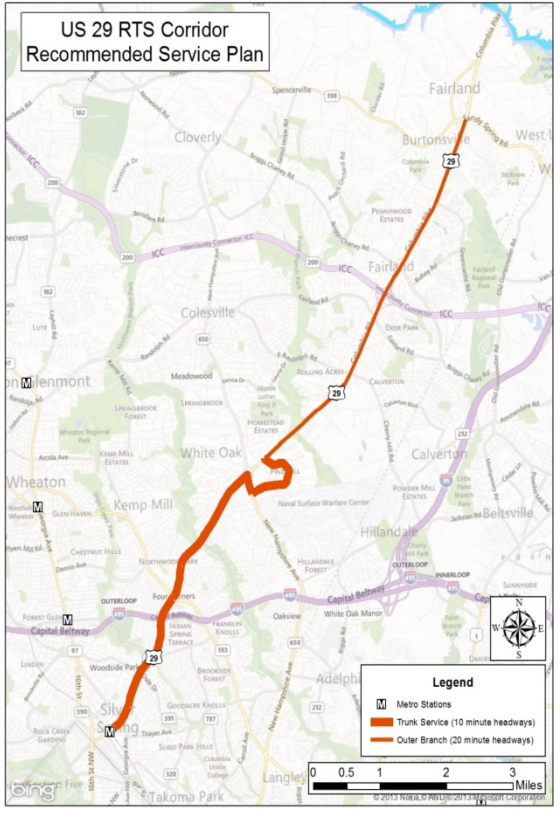


RTS Route Colesville Road/Columbia Pike (US 29)

SERVICE PLANNING CONCEPTS

Colesville Road (US 29) Service Plan

- Provide Faster Transit Option Along US 29 Connecting White Oak and Silver Spring
- Key Connections
  - Burtonsville
  - White Oak
  - Four Corners
  - Silver Spring
- Connecting Developing Commercial Centers & Activity Centers
- Multimodal Transit Connection

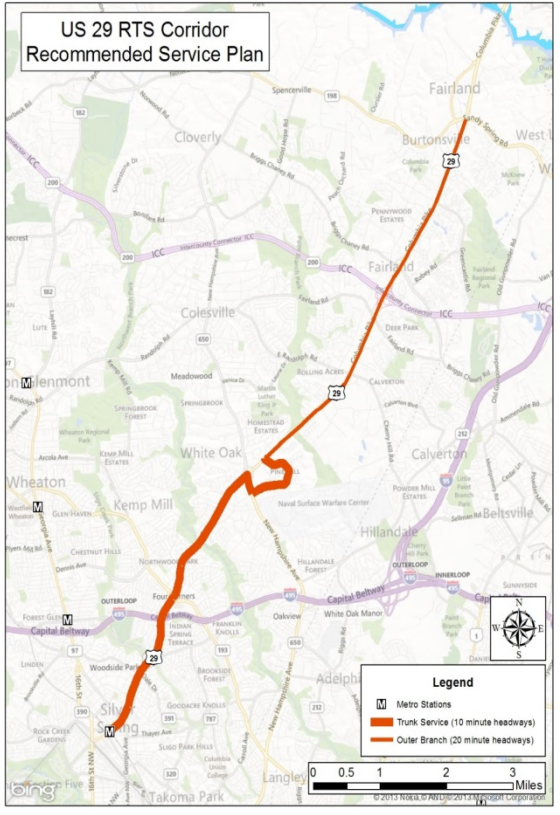


Colesville Road (US 29) Service Plan

Route Structure

- Trunk Between White Oak and Silver Spring (4.2 miles)
- Off-Peak Period Service 15 Minute Headways White Oak and Burtonsville (5.9 miles)
- Randolph Road RTS Operate on top of the US 29 RTS service between Randolph Road and White Oak

Service	Headway (minutes)			Speed (mph)		
	AM	Off-Peak	PM	AM	Off-Peak	PM
Existing[1]	30	30	30	11	14	10
RTS[2,3,4]	10	10	10	14	17	14
Difference	20	20	20	3	3	4
Percent Travel Time Savings	--	--	--	27%	21%	40%

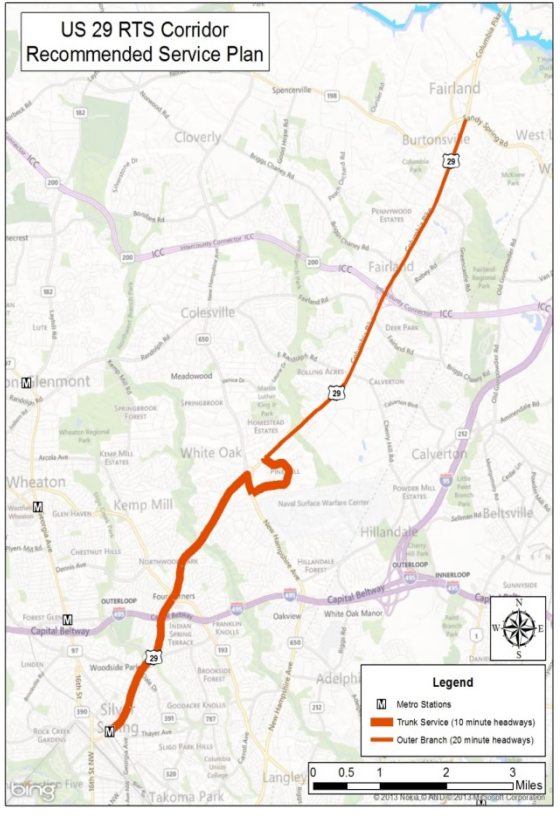


Colesville Road (US 29) Service Plan

Modifications to Local Service

- Z8 would continue with half the headways of service today, RideOn would continue service and not be impacted but would use the infrastructure.

- All Z routes and MTA commuter buses would take advantage of the proposed RTS infrastructure at any time they are operating on US 29.



Colesville Road (US 29) Service Plan

Recommended Phasing

Phase I

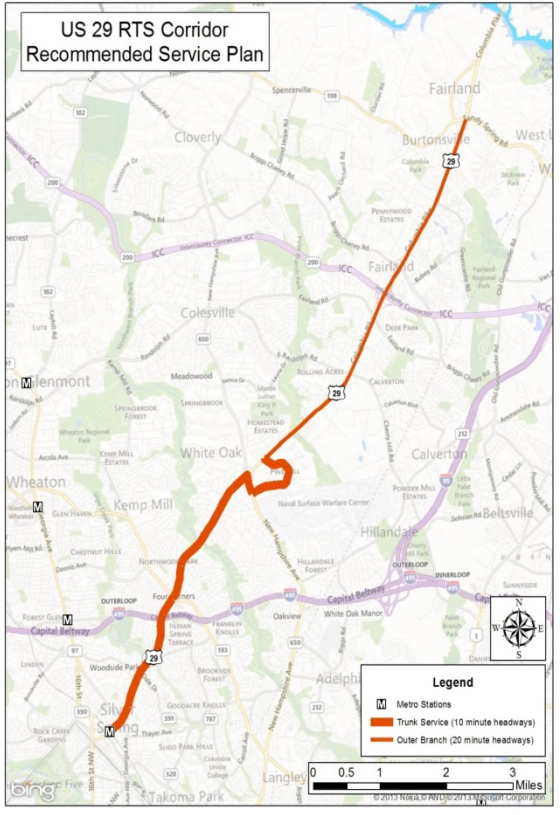
Enhanced limited stop bus service (e.g., Metro Extra) along the US 29 Corridor between Silver Spring and White Oak with peak period service at 10-minute headways.

Phase II

After the US 29 Busway is completed RTS service would be provided between Silver Spring and White Oak at ten minute headways. Service in the off-peak would continue to Burtonsville PNR lot at 15 minute headways.

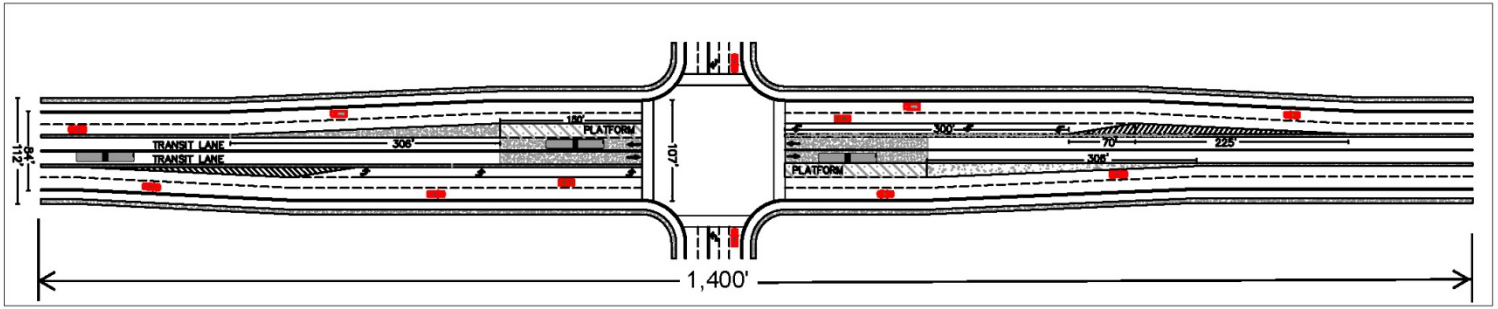
Phase III

10-minute headways across the entirety of the US 29 RTS route alignment at such time as demand warrants it.



QUESTIONS

Layout 1: 2–LANE MEDIAN STATION (1 of 2)



Scale: 1"=150'

(Sheet Size 8 1/2" X 11")

QUANTITIES:

TRAVEL LANES:

1. Curb and Gutter - 2,499.06 l.f.
2. Asphalt (4 lanes) - 69,306.8 s.f.
3. Asphalt (6 lanes) - 96,796.2 s.f.

TRANSIT LANES:

1. Curb and Gutter - 5,032.5 l.f.
2. Platforms (2) - 4,500 s.f.
3. Concrete Stopping Pad - 8,400 s.f.
4. Concrete Taper and Median - 8,386 s.f.
5. Asphalt - 26,572 s.f.

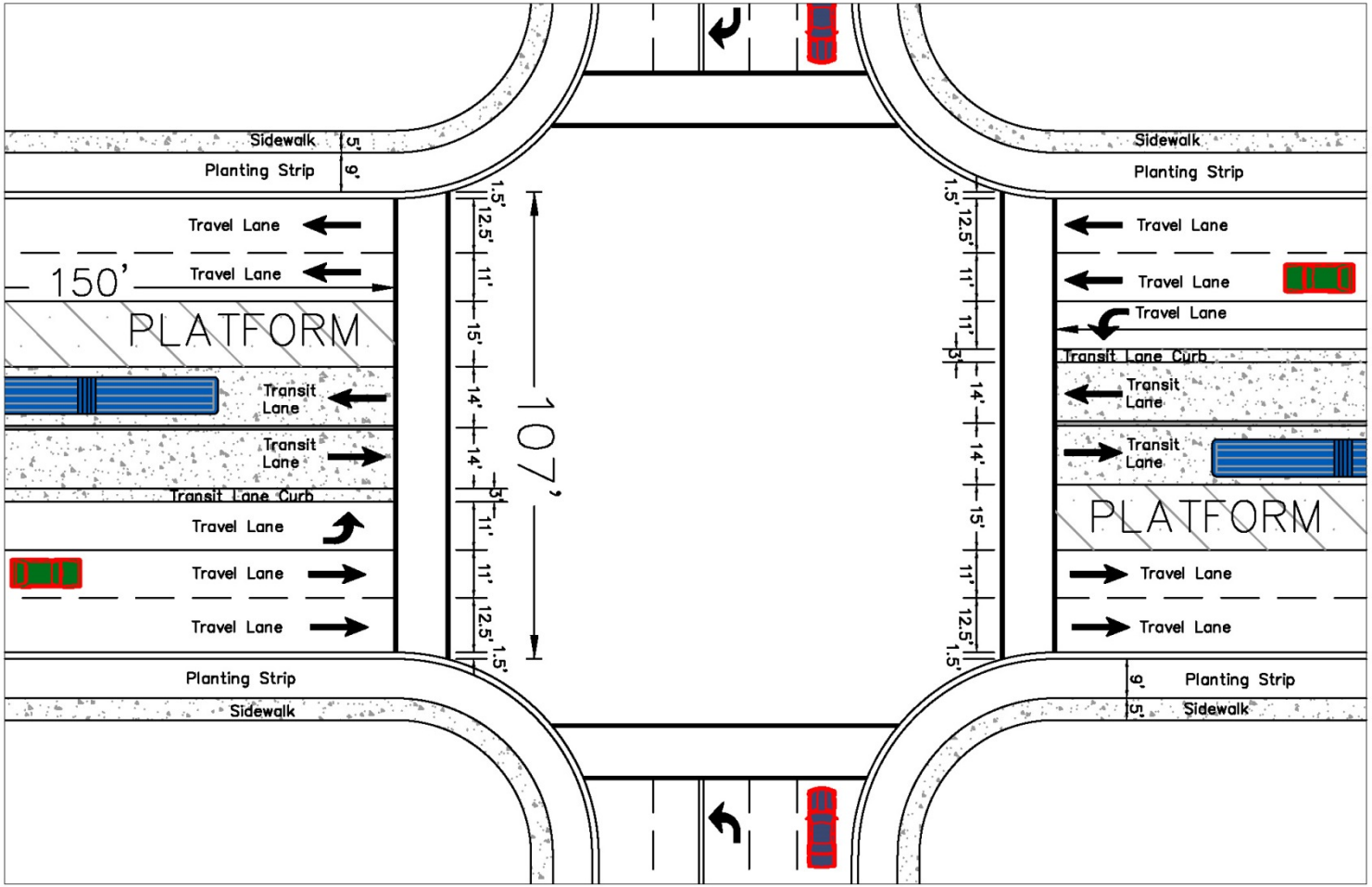
OTHER:

1. Sidewalk (5' width) - 2,499.06 l.f.

INTERSECTION:

1. Curb and Gutter - 302 l.f.
2. Asphalt - 15,704 s.f.

Layout 1: 2–LANE MEDIAN STATION (2 of 2)



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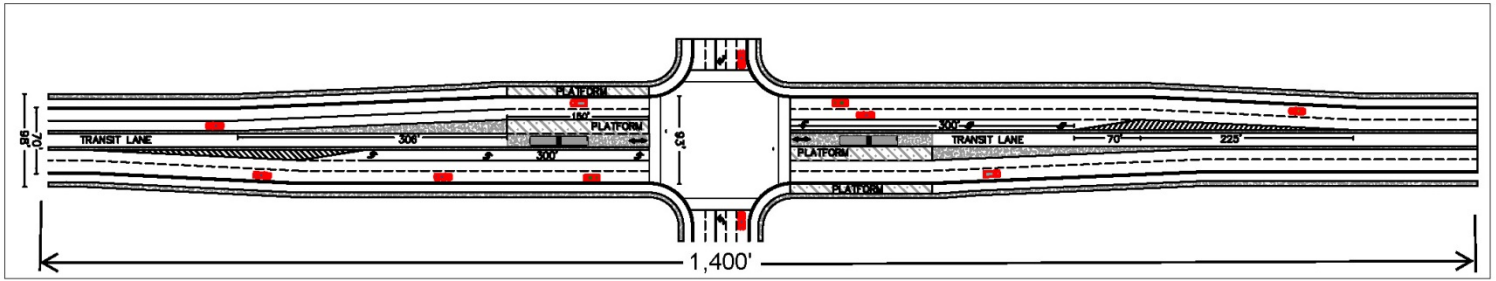
Layout 2: ONE–LANE REVERSIBLE MEDIAN STATION (1 of 2)



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QUANTITIES:

TRAVEL LANES:

1. Curb and Gutter - 2,499.06 l.f.
2. Asphalt (4 lanes) - 69,306.8 s.f.
3. Asphalt (6 lanes) - 96,796.5 s.f.

TRANSIT LANES:

1. Curb and Gutter - 5,032.5 l.f.
2. Platforms (2) - 7,500 s.f.
3. Concrete Stopping Pad - 4,200 s.f.
4. Concrete Taper and Median - 8,386 s.f.
5. Asphalt - 13,286 s.f.

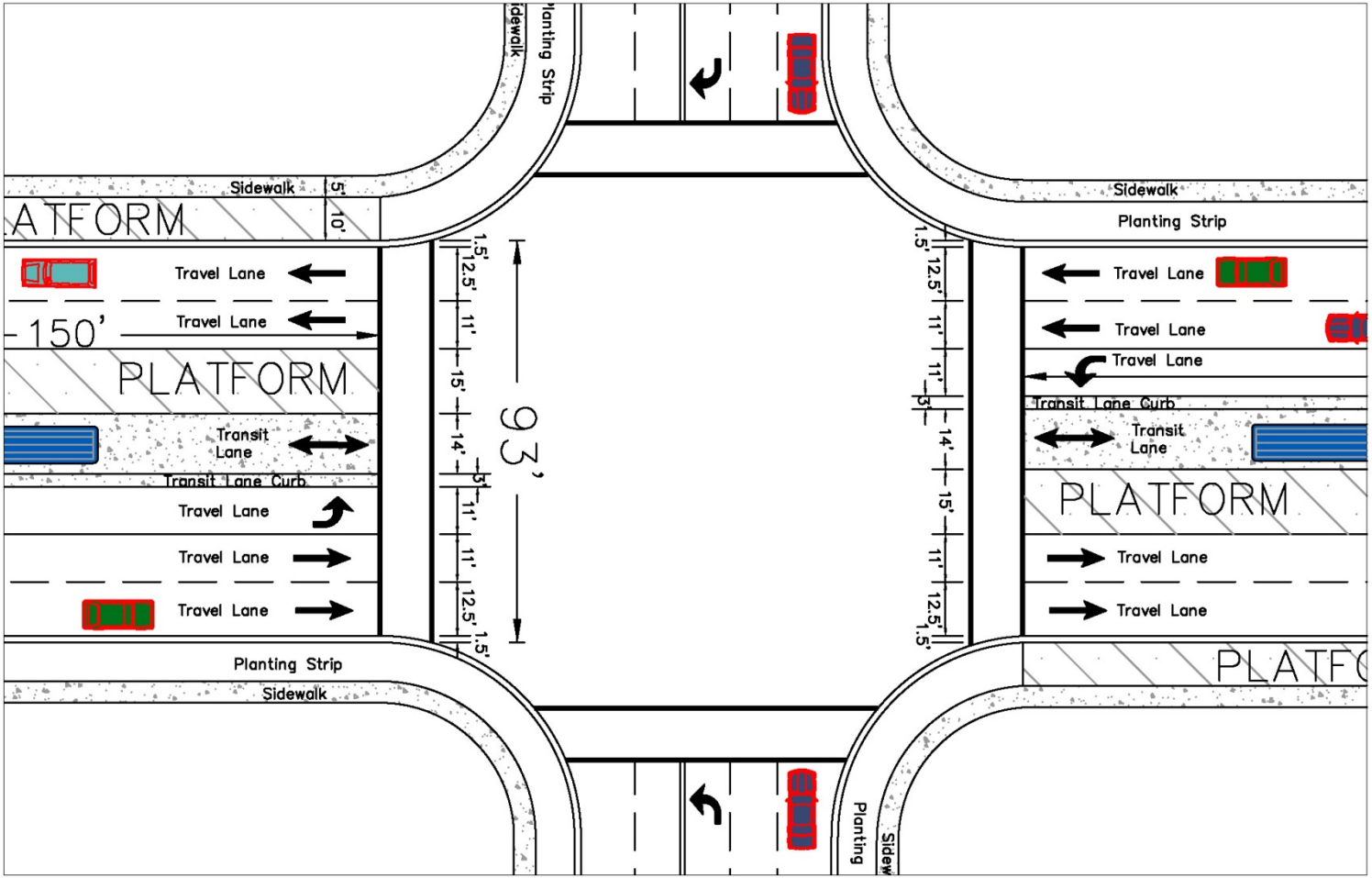
OTHER:

1. Sidewalk (5' width) - 2,499.2 l.f.

INTERSECTION:

1. Curb and Gutter - 302 l.f.
2. Asphalt - 13,590 s.f.

Layout 2: ONE–LANE REVERSIBLE MEDIAN STATION (2 of 2)



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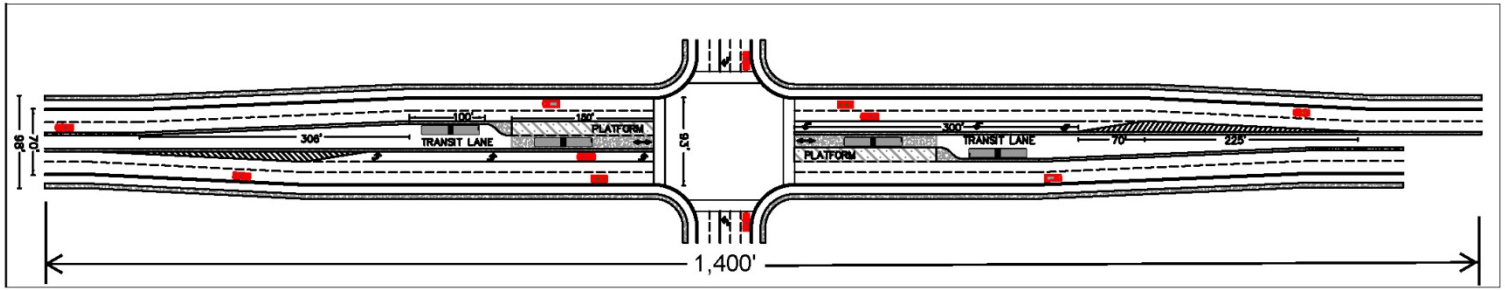
Layout 3: ONE–LANE BI–DIRECTIONAL MEDIAN STATION (1 of 2)



Scale: 1"=150'

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QUANTITIES:

TRAVEL LANES:

1. Curb and Gutter - 2,499.06 l.f.
2. Asphalt (4 lanes) - 69,306.8 s.f.
3. Asphalt (6 lanes) - 96,796.5 s.f.

TRANSIT LANES:

1. Curb and Gutter - 5,003.2 l.f.
2. Platforms (2) - 4,500 s.f.
3. Concrete Stopping Pad - 4,200 s.f.
4. Concrete Taper and Median - 4,996.6 s.f.
5. Asphalt - 18,918.02 s.f.

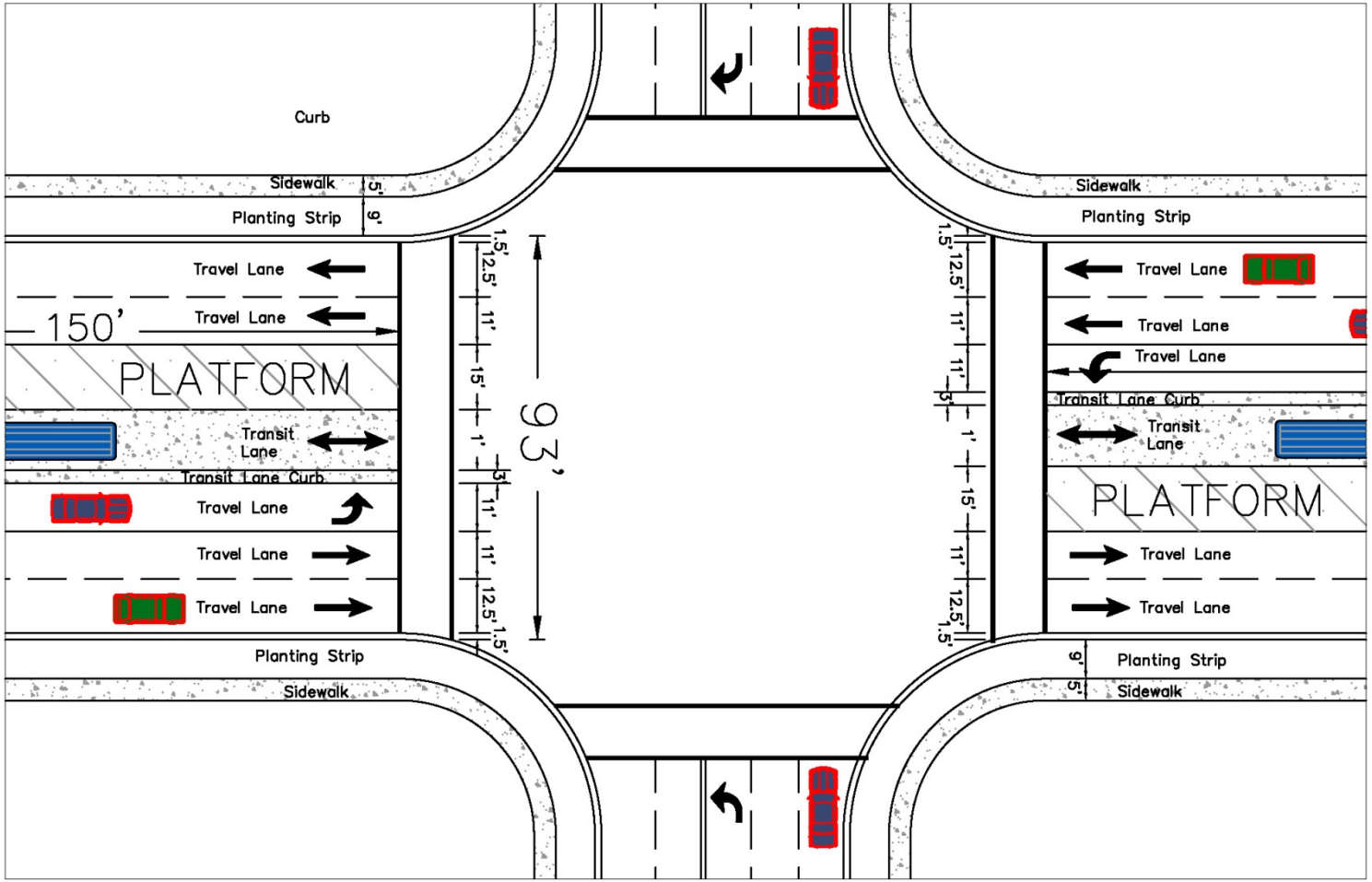
OTHER:

1. Sidewalk (5' width) - 2,499.06 l.f.

INTERSECTION:

1. Curb and Gutter - 302 l.f.
2. Asphalt - 13,590 s.f.

Layout 3: ONE–LANE BI–DIRECTIONAL MEDIAN STATION (2 of 2)



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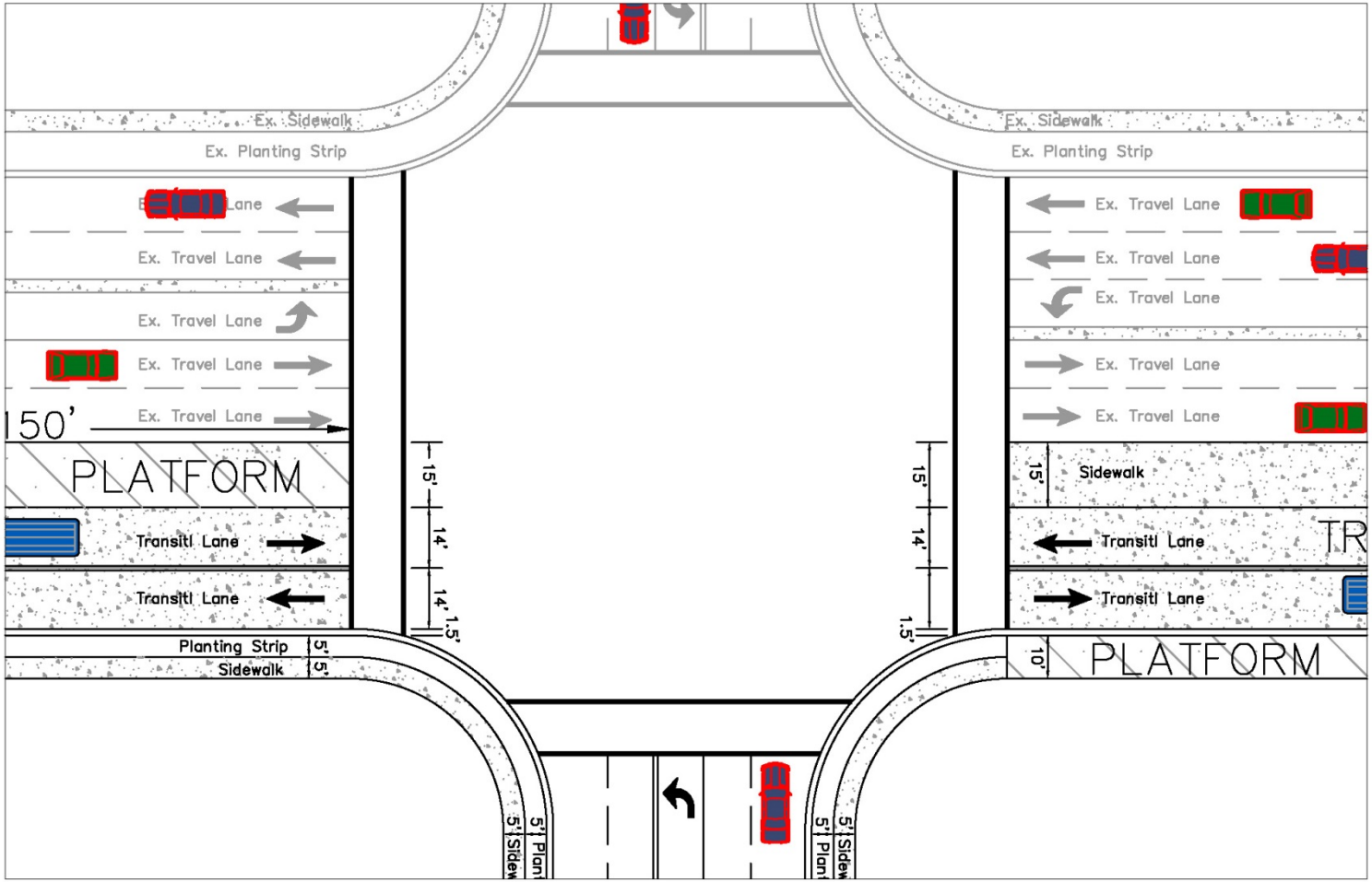
Layout 4: TWO-LANE SIDE RUNNING STATION (2 of 2)



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