



May 11, 2017

# Route 28 Corridor Feasibility Study



**Northern Virginia Transportation Authority  
Briefing**

# Agenda

- I. Introductions
- II. Project Team
- III. Goals and Objectives
- IV. Study Area and Scope
- V. Existing Conditions
- VI. Development of Preliminary Alternatives
- VII. Development of Screening Criteria
- VIII. Screening of Preliminary Alternatives
- IX. Open Discussion
- X. Wrap Up

# Project Team



## II. Project Team



**Rick Canizales**  
Prince William  
County  
Co-Project Manager



**Steve Burke**  
City of Manassas  
Co-Project Manager



**Randy Boice**  
JMT Project Manager



**Brian Curtis**  
JMT Deputy Project  
Manager



**Rodney Hayzlett**  
JMT Consultant  
Senior Advisor



**Sujith Racha**  
JMT Senior Traffic  
Engineer

# Project Goals and Objectives



# III. Project Goals and Objective

## GOAL

The project goals for the Route 28 Corridor Feasibility Study are to identify infrastructure improvements that will improve travel times and network reliability within the Route 28 Corridor through Prince William County, the City of Manassas and City of Manassas Park and develop a plan to implement these improvement project(s).

# III. Project Goals and Objective

## Objectives

1. Reduce congestion and improve network reliability on Route 28 from Godwin Drive through Historic Downtown Manassas to Liberia Avenue.
2. Reduce congestion and improve network reliability on Route 28, Centreville Road – between Liberia Avenue and Compton Road.
3. Facilitate the weekday peak period commuter flows between I-66 and the residential communities in Manassas Park, Manassas, and Prince William County.
4. Provide increased opportunities for alternative modes of travel such as travel by bicycles, walking and carpooling/vanpooling.
5. Provide improved access to transit facilities.
6. Identify improvement project(s) that have public consensus.
7. Identify improvement project(s) that avoid or minimize environmental impacts.

# III. Project Goals and Objective

## Objectives – cont.

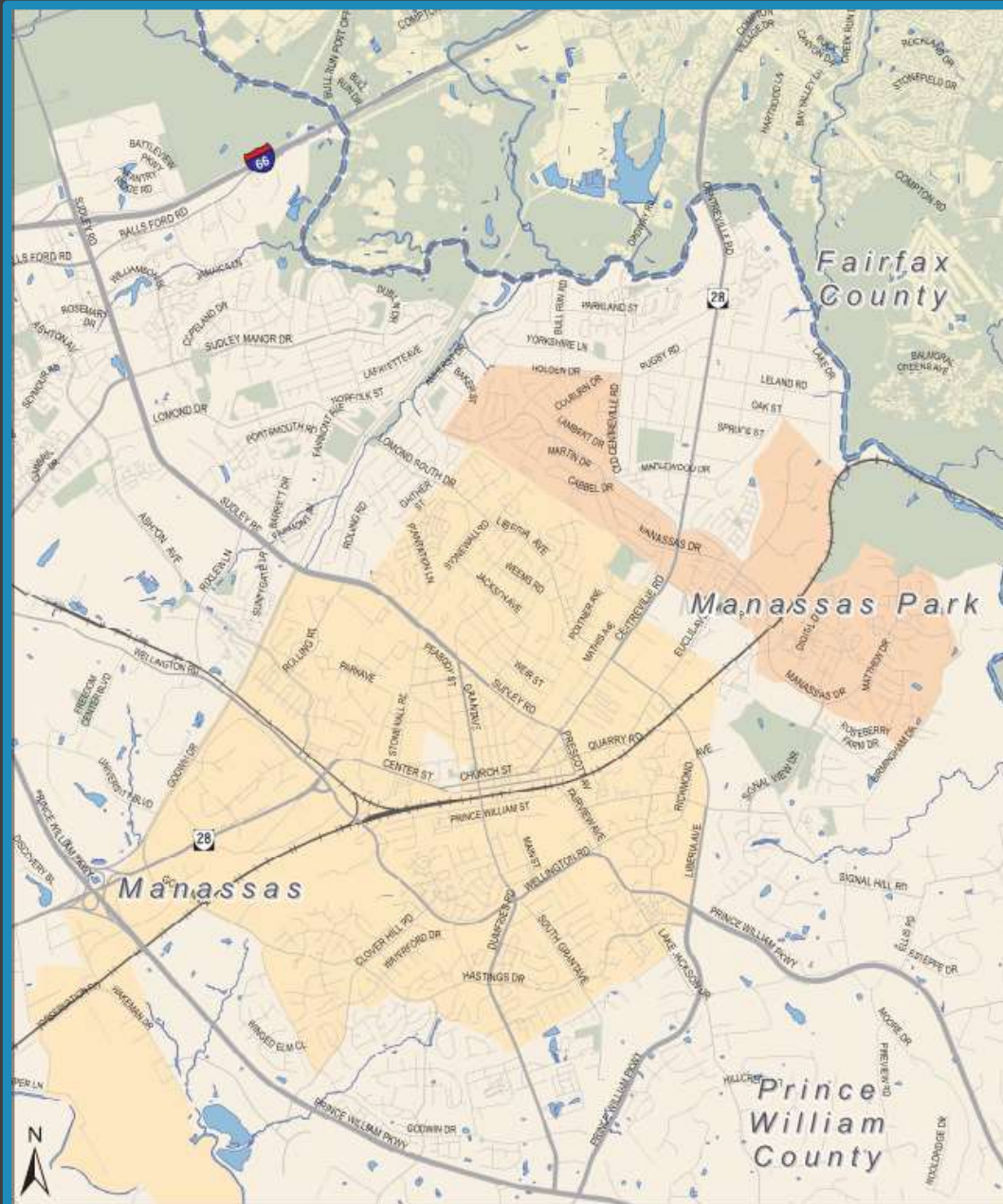
8. Identify improvement project(s) that avoid or minimize impacts to existing development.
9. Identify improvement project(s) that complement other Route 28 improvements currently being implemented by VDOT, Fairfax County, City of Manassas, City of Manassas Park, and Prince William County. These include:
  - a. Widening of Route 28 to six lanes between Godwin Drive and Pennsylvania Avenue. Improvements include adding a dual-turn lane on northbound
  - b. Route 28 Phase III - Widening of Route 28 to a six-lane divided facility between Linton Hall Road and Pennsylvania Avenue.
  - c. Widening of Route 28 to six lanes in Fairfax County between Bull Run and Route 29 including intersections improvements and pedestrian/bicycle facilities.



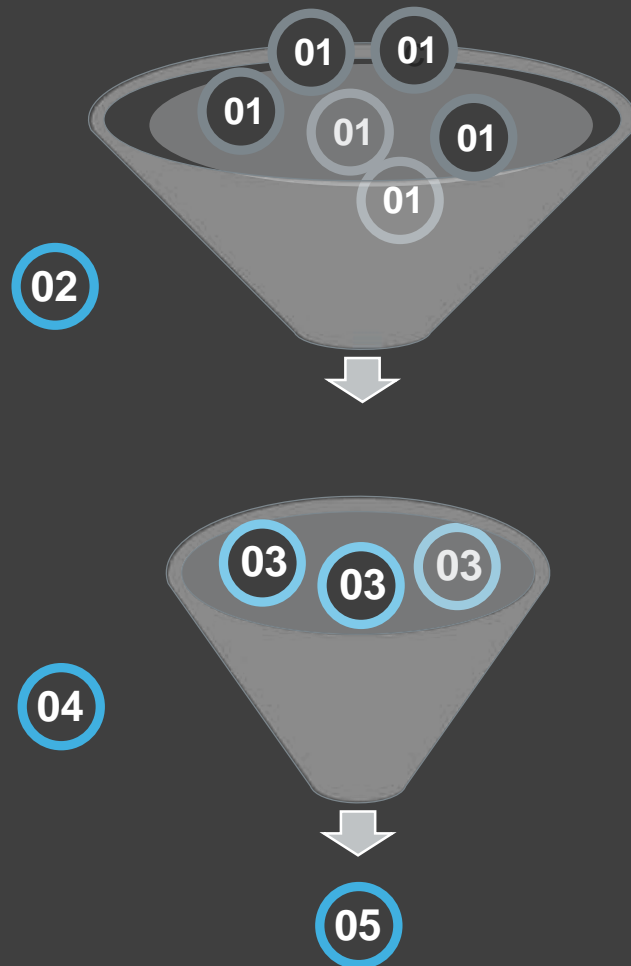
# Study Area and Scope



# IV. Study Area



# IV. Alternatives Screening / Evaluation



## 01 Preliminary Alternatives

## 02 Initial Screening

Criteria:

- Meeting study goals objectives
- Environmental fatal flaws
- Political support
- Ability to be implemented

## 03 Feasible Alternatives

Up to 5 for detailed analysis

## 04 Alternatives Evaluation

Criteria:

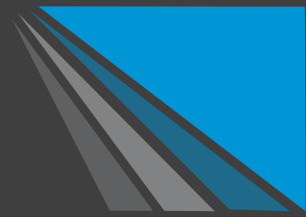
- Effectiveness in meeting study objectives
- 2040 Congestion Relief
- Environmental Impacts
- Right of Way / Utility Impacts
- Costs

## 05 Recommended Alternative(s)

# Existing Conditions



# V. Existing Conditions



## Results

### Travel Times

- Route 28 from Godwin Drive to Old Centreville Road

AM northbound ~ 49 mins.

PM southbound ~ 30 mins.

### LOS

- A total of 34 signalized intersections were analyzed
- No. of intersections operating at a LOS E and/or worse

AM peak hour – 8

PM peak hour – 9

### Queueing

- Excessive queuing, blocking, and system volatility observed between Liberia Avenue to New Braddock Road along Route 28

AM peak hour – northbound

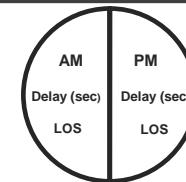
PM peak hour – southbound





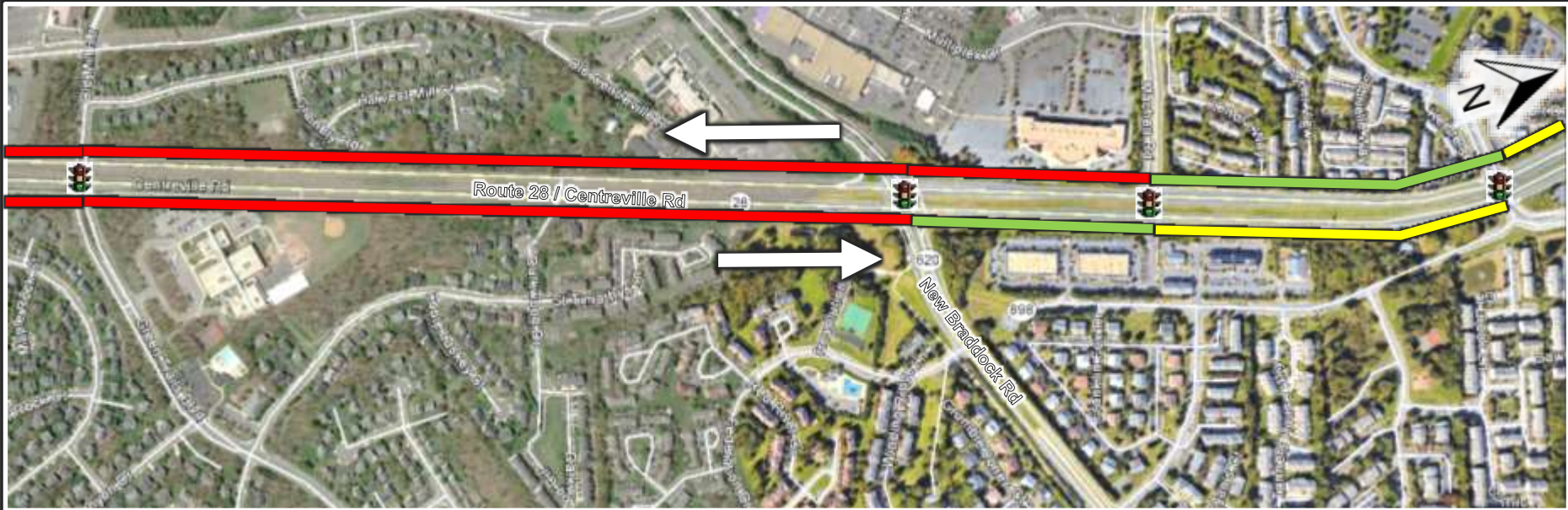
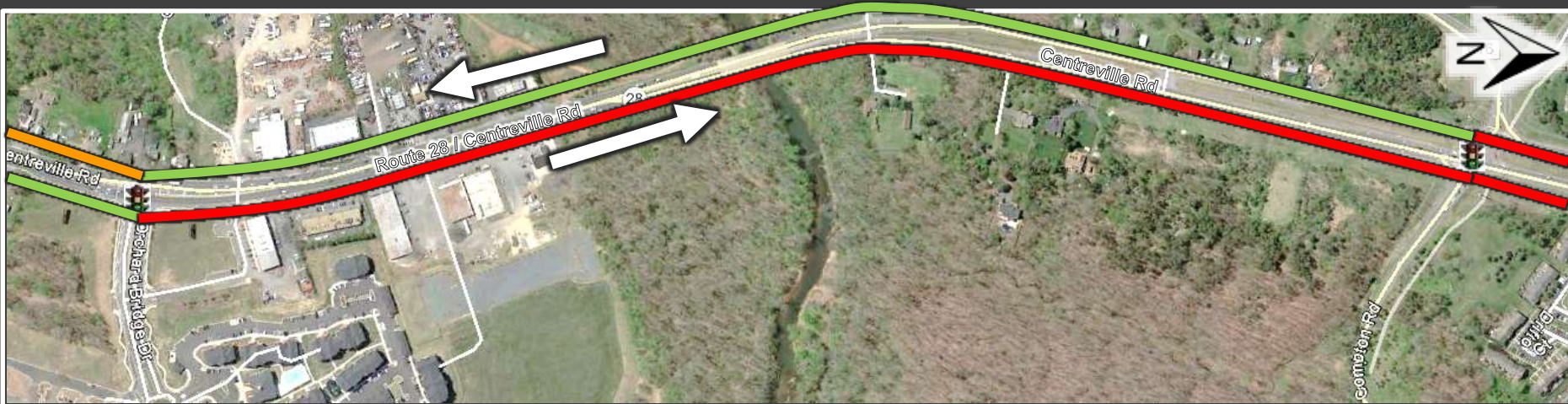
## Legend

### Level of Service



Note: Map not to scale





## Legend

### Level of Service

LOS "A" through "C" LOS "D" LOS "E" LOS "F"



AM Northbound



PM Southbound



Signalized Intersection

Note: Map not to scale

# Development of Preliminary Alternatives







# VI. Development of Preliminary Alternatives

ALT. 1: No Build

 ALT. 2A: Godwin Drive extended to Route 28 south of Bull Run

 ALT. 2B: Godwin Drive extended to Compton Road

 ALT. 3: Godwin Drive extended to match I-66 near the existing Compton Road crossing (the former Tri-County Parkway alignment)

 ALT. 4: Widening Route 28 on existing alignment between Liberia Avenue and the Fairfax County line

 ALT. 5: New Route 28 Reversible Lanes between Manassas Drive and the Fairfax County Line

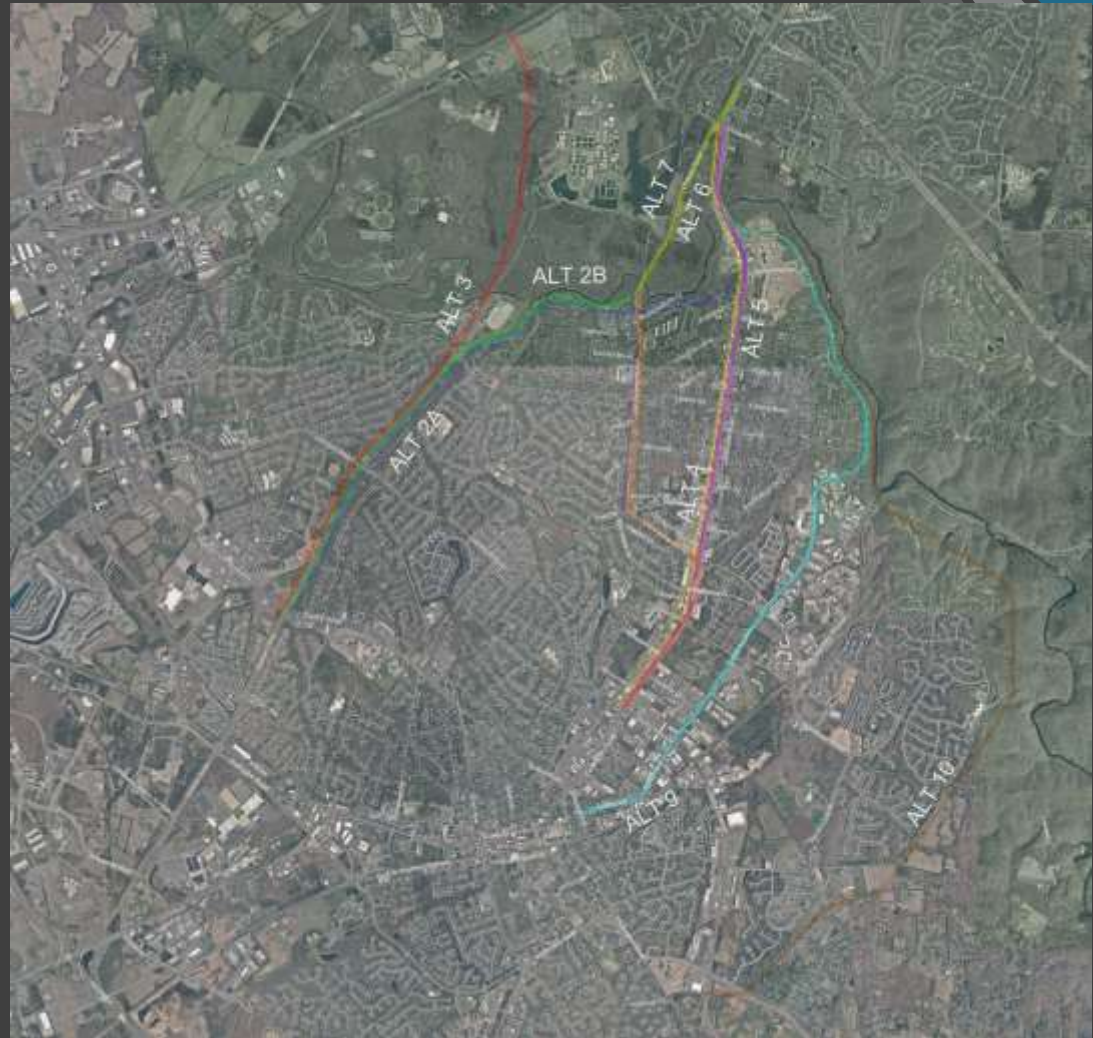
 ALT. 6: Widening Old Centreville Road/Ordway Road throughout its length

 ALT. 7: Converting Old Centreville Road/Ordway Road to a reversible facility

ALT. 8: Transit Alternatives to include BRT and/or VRE expansion along the corridor (Not Shown)

 ALT. 9: Euclid Avenue extension north and south

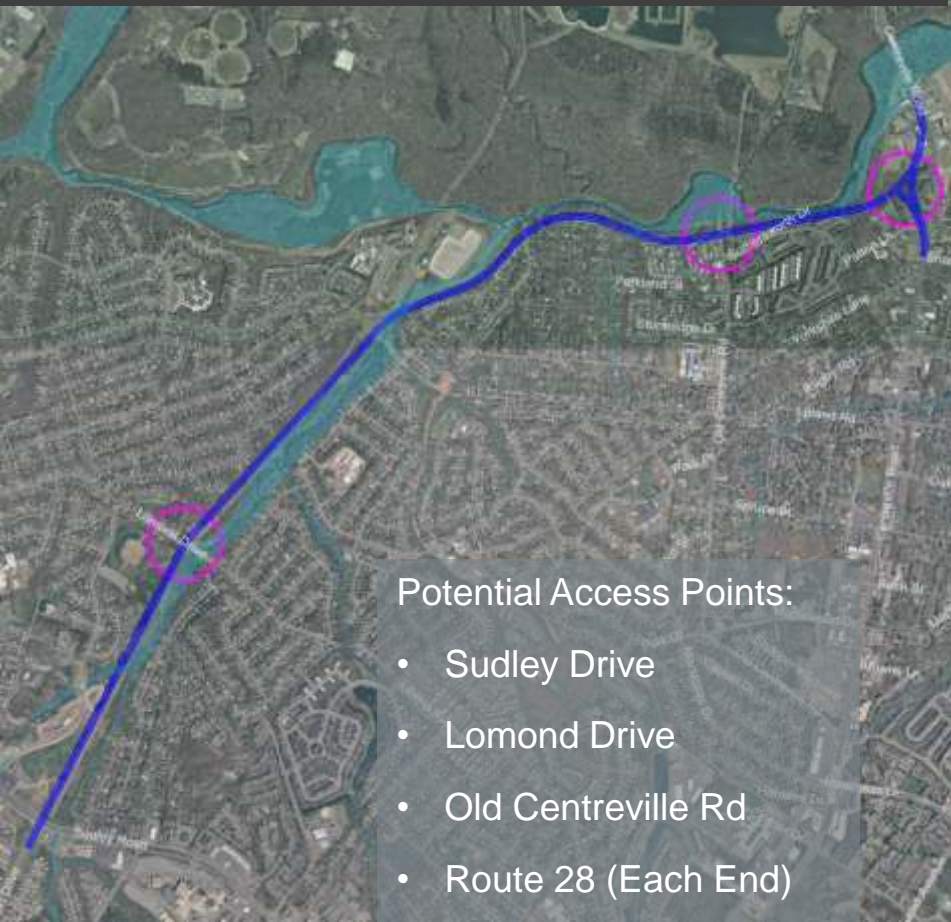
 ALT. 10: An new Eastern alignment



# VI. Development of Preliminary Alternatives

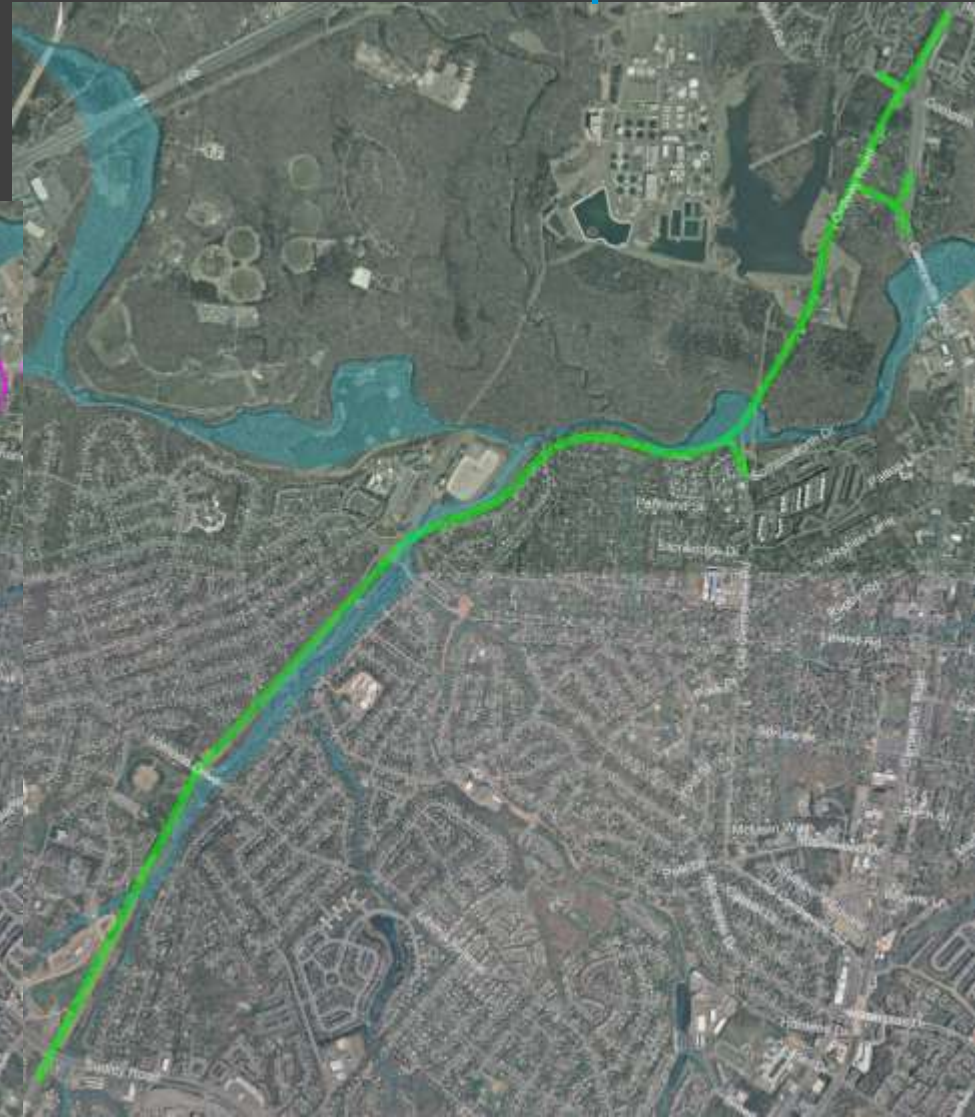
Alt 2B – Godwin Drive  
Extended to Compton Rd

Alt 2A – Godwin Drive  
Extended



Potential Access Points:

- Sudley Drive
- Lomond Drive
- Old Centreville Rd
- Route 28 (Each End)





# VI. Development of Preliminary Alternatives

## Alt 3 – Godwin Drive Extended to I-66

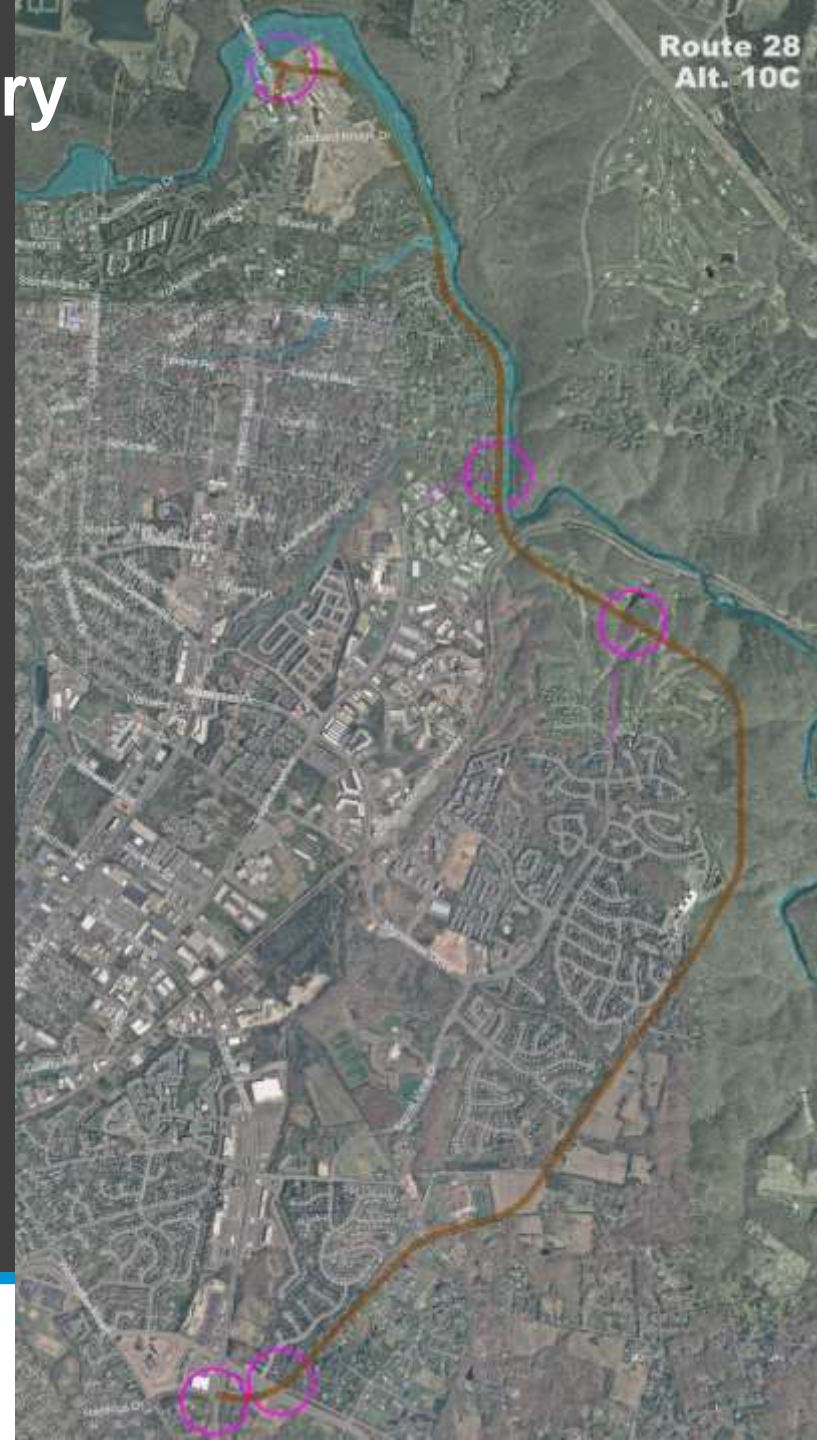


# VI. Development of Preliminary Alternatives

## Alt 10 – New Eastern Bypass

Potential Access Points:

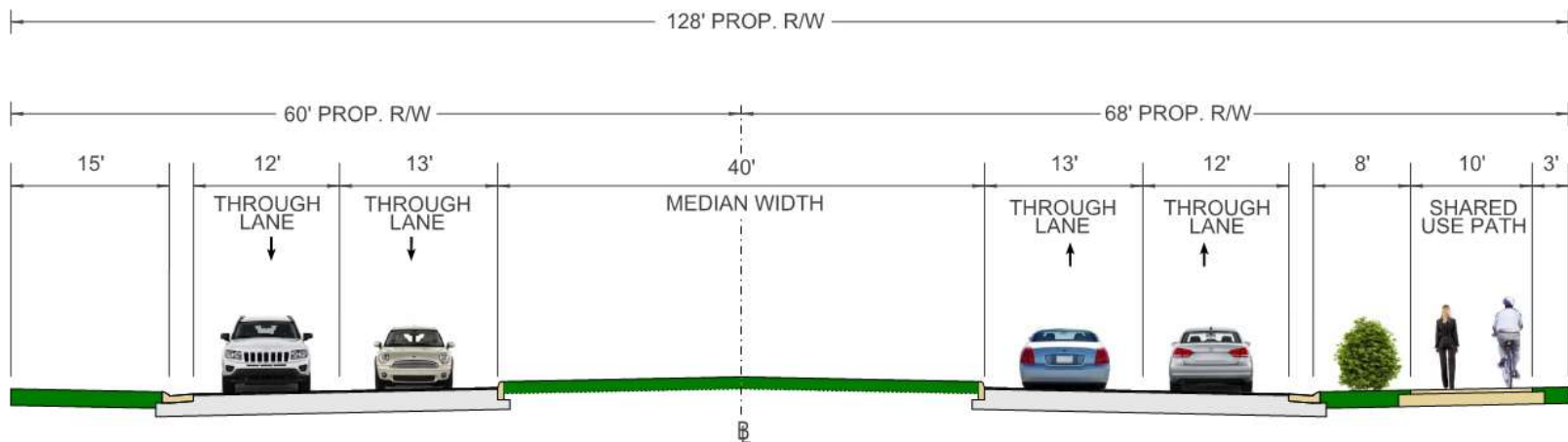
- Liberia Avenue
- Wellington Drive
- Manassas Drive Extended
- Euclid Avenue Extended
- Route 28 (Each End)



# VI. Development of Preliminary Alternatives

## Alternatives 2A, 2B, 3 & 10

### TYPICAL SECTION (Not to Scale)





# VI. Development of Preliminary Alternatives

## Alt 4 – Widen Route 28

Alternative chosen to be modeled:

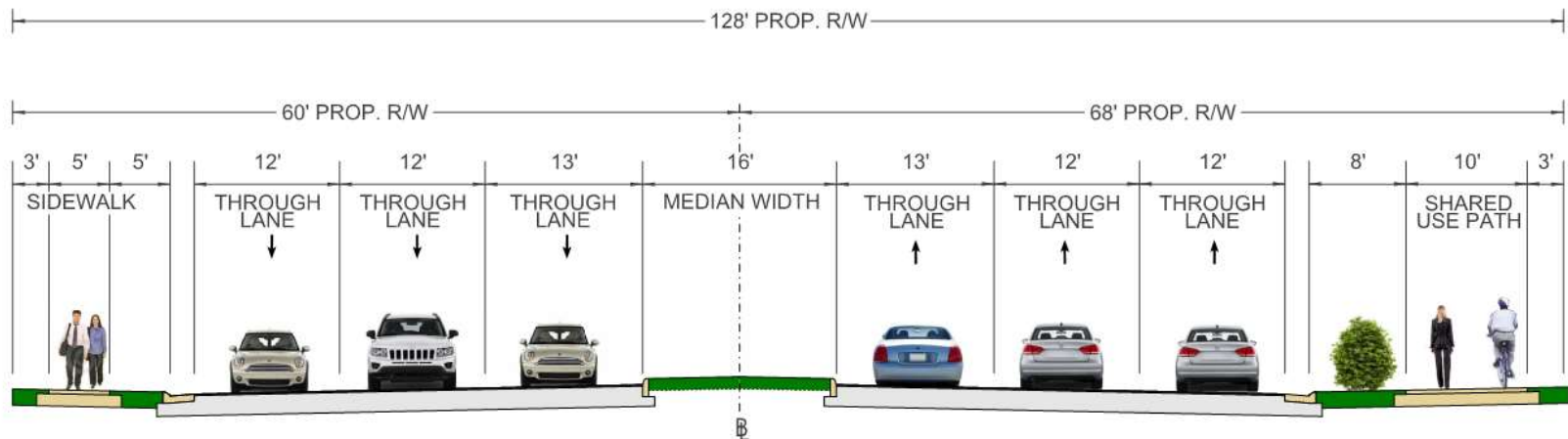
- Add a lane in each direction between Liberia Avenue and end of Fairfax County widening.



# VI. Development of Preliminary Alternatives

## Alternative 4

### TYPICAL SECTION (Not to Scale)



# VIII. Development of Preliminary Alternatives

## Alt 5 – Reversible Lanes on Route 28

1. Barrier separated lane between Manassas Drive and Fairfax County Line
2. No left turns between Manassas Drive and Bull Run all day.
3. Add a lane in each direction between Liberia Avenue and Manassas Drive

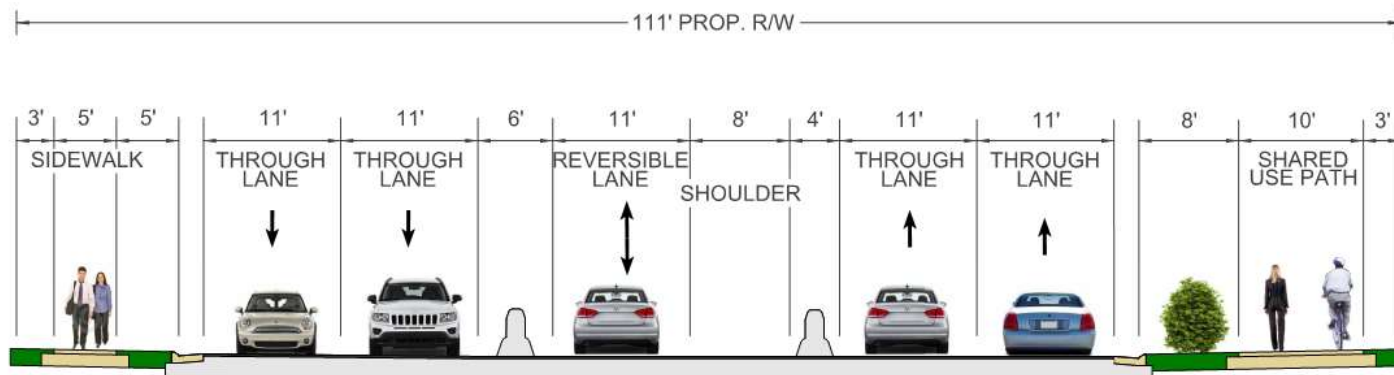





# VI. Development of Preliminary Alternatives

## Alternative 5

### TYPICAL SECTION (Not to Scale)



## VI. Development of Preliminary Alternatives



Alt 9 – Euclid  
Avenue Extension  
North & South

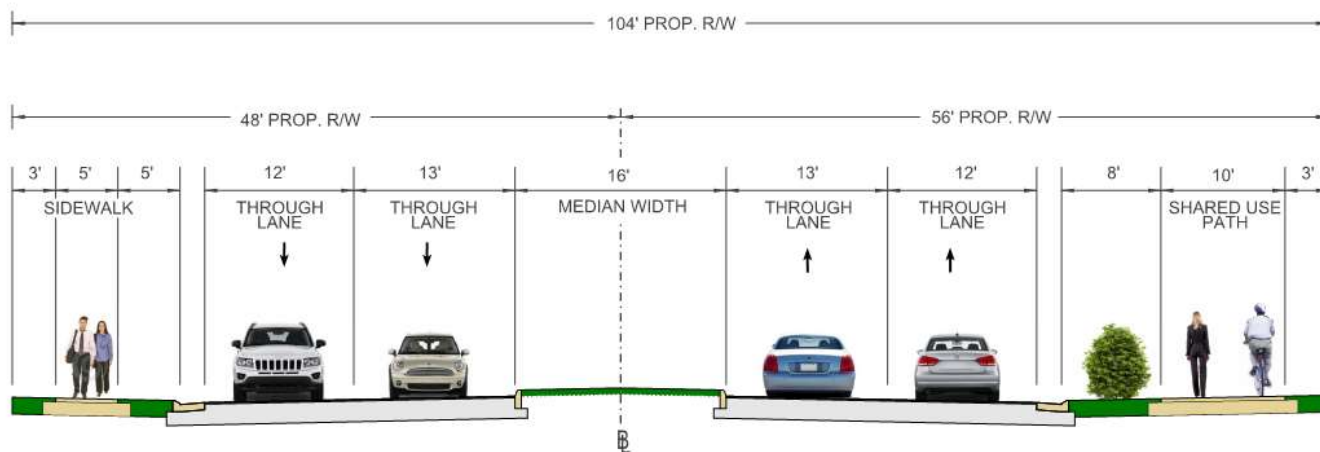


Alt 6 – Widen Old  
Centreville Rd

# VI. Development of Preliminary Alternatives

## Alternatives 6 & 9

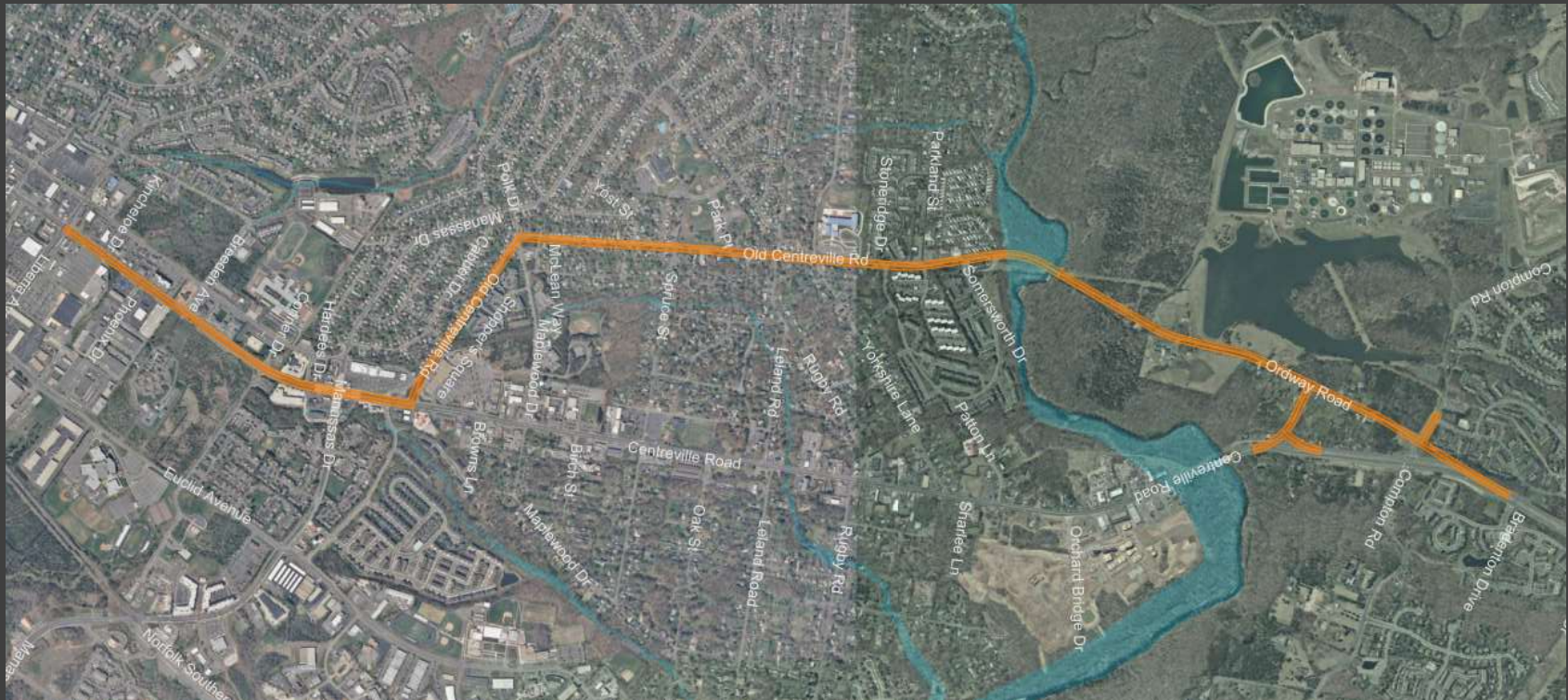
### TYPICAL SECTION (Not to Scale)





# VI. Development of Preliminary Alternatives

## Alt 7 – Reversible Lands on Old Centreville Rd

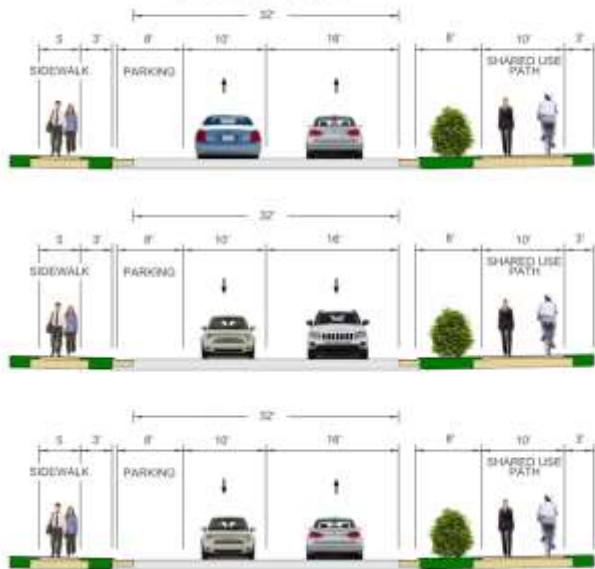


# VI. Development of Preliminary Alternatives

## Alternative 7

### TYPICAL SECTION (Not to Scale)

Southern Portion



AM Peak Hours

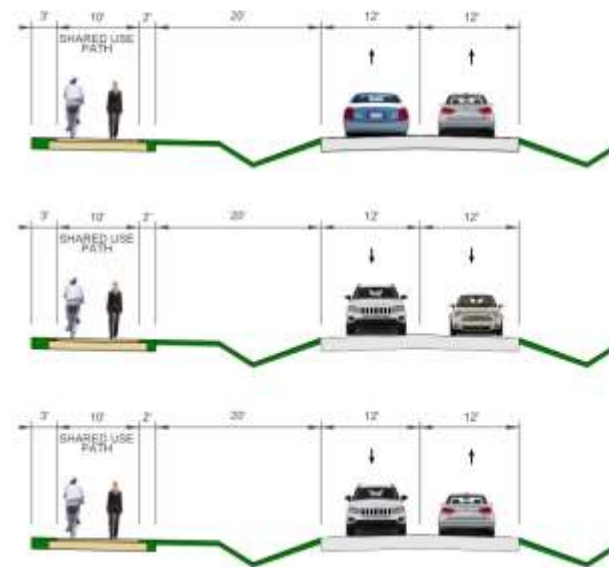
PM Peak Hours

Off Peak Hours

## Alternative 7

### TYPICAL SECTION (Not to Scale)

Northern Portion



AM Peak Hours

PM Peak Hours

Off Peak Hours

# Development of Screening Criteria



# VII. Development of Screening Criteria

Screening Criteria established  
to attain study objectives

## Key Objectives Summary

*Obj. 1: Reduce Congestion (Historical Downtown Manassas)*

*Obj. 2: Reduce Congestion (Liberia Ave to Compton Rd)*

*Obj. 3: Facilitate Peak Period Commute Flows*

*Obj. 4: Increased Opportunities for Alternative Modes of Travel*

*Obj. 5: Improved Access to Transit Facilities*

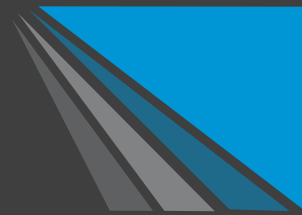
*Obj. 6: Improvement Projects with Public Consensus*

*Obj. 7: Improvement Projects with Minimal Environmental Impacts*

*Obj. 8: Improvement Projects with Minimal Existing Conditions Impacts*

*Obj. 9: Improvement Projects that Complement Route 28 Operations*

# VII. Development of Screening Criteria



X

Key Objective Attainable

## Key Objectives Summary

Obj. #	Objective Description
Obj. 1	Reduce Congestion (Historical Downtown Manassas)
Obj. 2	Reduce Congestion (Liberia Ave to Compton Rd)
Obj. 3	Facilitate Peak Period Commute Flows
Obj. 4	Increased Opportunities for Alternative Modes of Travel
Obj. 5	Improved Access to Transit Facilities
Obj. 6	Improvement Projects with Public Consensus
Obj. 7	Improvement Projects with Minimal Environmental Impacts
Obj. 8	Improvement Projects with Minimal Existing Conditions Impacts
Obj. 9	Improvement Projects that Complement Route 28 Operations

## Traffic Impacts

3

Peak Periods (AM & PM) Traffic Served by Alternative

1

Change in Peak Periods (AM & PM) Traffic per Lane on Route 28 (Historic Downtown Manassas)

2

Change in Peak Periods (AM & PM) Traffic per Lane on Route 28 (Liberia Ave to Compton Rd)

3

Annual Travel Time Savings per Vehicle

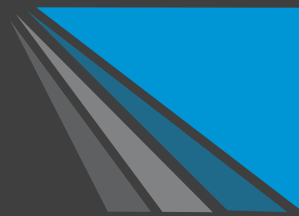
4,5

Multimodal Compatibility

LEGEND



# VII. Development of Screening Criteria



## Policy Considerations

9

Consistency with Local & Regional Plans

## Environmental Impacts

7

4f Properties / Conservation Easements / Historical Impacts

7

Floodway / Floodplains / Streams / Wetlands

X

Key Objective Attainable

### Key Objectives Summary

Obj. 1	Reduce Congestion (Historical Downtown Manassas)
Obj. 2	Reduce Congestion (Liberia Ave to Compton Rd)
Obj. 3	Facilitate Peak Period Commute Flows
Obj. 4	Increased Opportunities for Alternative Modes of Travel
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Obj. 7	Improvement Projects with Minimal Environmental Impacts
Obj. 8	Improvement Projects with Minimal Existing Conditions Impacts
Obj. 9	Improvement Projects that Complement Route 28 Operations

## Socioeconomic/ROW Impacts

8

ROW Impacts to Businesses / Residential / Churches / Schools

8

Access Management Issues

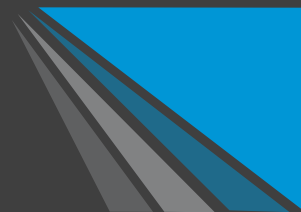
LEGEND

# Screening of Preliminary Alternatives



# VIII. Screening of Preliminary Alternatives

## Alternative Rating



Positive Impacts		
•	0 pts.	Neutral / Minimal / No Positive Impact
□	1 pts.	Low Positive Impact
▣	2 pts.	Medium Positive Impact
■	3 pts.	High Positive Impact

Negative Impacts		
•	0 pts.	Neutral / Minimal / No Negative Impact
□	1 pts.	Low Negative Impact
▣	2 pts.	Medium Negative Impact
■	3 pts.	High Negative Impact

# VIII. Screening of Preliminary Alternatives

## Alternative Evaluation Matrix

Conceptual Alternative #	Alignment Color	Length in Miles	Traffic Impacts (when compared to 2040 No-Build)					Policy Considerations	Environmental Impacts			Socioeconomic/ROW Impacts		Alternative Rating	Alternative Selected to Move Forward
			Peak Periods (AM & PM) Traffic Served by Alternative	Change in Peak Periods (AM & PM) Traffic per Lane on Route 28 (Historical Downtown Manassas)	Change in Peak Periods (AM & PM) Traffic per Lane on Route 28 (Liberia Ave to Compton Rd)	Annual Travel Time Savings per Vehicle	Multimodal Compatibility		4f Properties / Conservation Easements / Historical Impacts	Floodway / Floodplains / Streams / Wetlands	ROW Impacts to Businesses / Residential / Churches / Schools	Access Management Issues			
Key Objectives Attainable			3	1	2	3	4, 5	6	7	7	8	8			
2040 No-Build			•	•	•	•	•	•	•	•	•	•	0	✓	
Alt 2A		4	□	□	□	□	□	□	□	□	□	□	6	✓	
Alt 2B		4.5	□	□	□	□	□	□	□	□	□	□	7	✓	
Alt 3		4	□	□	□	□	□	□	□	□	□	□	6	✗✗	
Alt 4		3.5	□	•	□	□	□	□	•	□	□	□	4	✗	
Alt 5		3.5	□	•	□	□	□	□	•	□	□	□	-2	✗	
Alt 6		4.5	□	•	□	□	□	□	•	□	□	□	4	✗	
Alt 7		4.5	□	•	□	□	□	□	•	□	□	□	-1	✗	
Alt 9		5	□	•	□	□	□	□	□	□	□	□	5	✓	
Alt 10		6.5	□	□	□	□	□	□	•	□	□	□	1	✗	

**Notes:**

✓ This alternative is recommended to be advanced for further study.

✗ This alternative is not recommended to be advanced for further study.

✗ Based on Executive Committee input, these alternatives may be advanced for further study.

✗✗ Alternative 3 is not recommended to move forward due to significant environmental impacts and the unlikelihood of the alternative to be approved by Federal Agencies based on outcome of previous NEPA studies.

Alternative 8: Exclusive BRT option along Route 28 is not currently planned nor included in the MWCOS model. Therefore, this alternative is eliminated from further evaluation.

Objective 6 (Public Consensus) will be evaluated under second screening process.

**Preliminary Alternatives**

Alt. 1	No Build
Alt. 2A	Godwin Dr extended to existing Route 28 south of Bull Run
Alt. 2B	Godwin Dr extended to Existing Route 28 at Compton Rd
Alt. 3	Godwin Dr extended to match I-66 near existing Compton Rd crossing (former Tri-County Parkway alignment)
Alt. 4	Widening Route 28 on existing alignment between Liberia Avenue and the Fairfax County line
Alt. 5	New Route 28 Reversible Lanes between Manassas Drive and the Fairfax County Line
Alt. 6	Widening Old Centerville Rd/Orday Rd throughout its length
Alt. 7	Converting Old Centerville Rd/Orday Rd to a reversible facility
Alt. 8	Transit Alternatives to include BRT and/or VRE expansion along the corridor (Not Shown)
Alt. 9	Euclid Avenue extension north and south
Alt. 10	A new Eastern alignment

**Legend**





Negative Impacts		Positive Impacts	
•	0 pts. Neutral / Minimal / No Negative Impact	•	0 pts. Neutral / Minimal / No Positive Impact
□	-1 pts. Low Negative Impact	□	1 pts. Low Positive Impact
□	-2 pts. Medium Negative Impact	□	2 pts. Medium Positive Impact
■	-3 pts. High Negative Impact	■	3 pts. High Positive Impact

**Key Objectives Summary**

Obj. 1	Reduce Congestion (Historical Downtown Manassas)
Obj. 2	Reduce Congestion (Liberia Ave to Compton Rd)
Obj. 3	Facilitate Peak Period Commute Flows
Obj. 4	Increased Opportunities for Alternative Modes of Travel
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Obj. 7	Improvement Projects with Minimal Environmental Impacts
Obj. 8	Improvement Projects with Minimal Existing Conditions Impacts
Obj. 9	Improvement Projects that Complement Route 28 Operations

Route 28 Corridor Feasibility Study

Preliminary Alternative Evaluation Matrix: 1st Screening



# VIII. Screening of Preliminary Alternatives

## Alternatives Carried Forward

### Executive Committee Recommendations



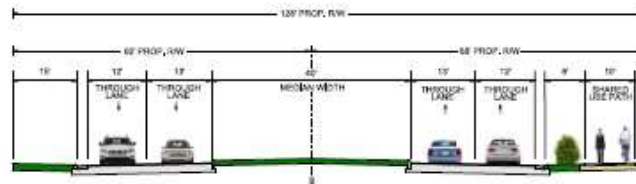
# VIII. Screening of Preliminary Alternatives

## Alternatives Carried Forward

### Typical Sections

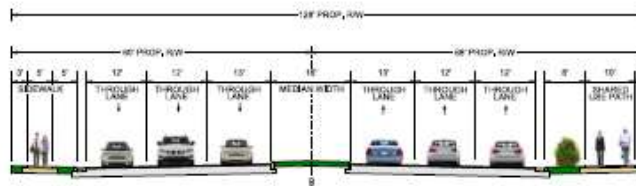
Alternatives 2A, 2B

TYPICAL SECTION  
(Not to Scale)



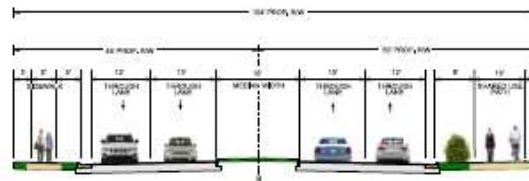
Alternative 4

TYPICAL SECTION  
(Not to Scale)



Alternative 9

TYPICAL SECTION  
(Not to Scale)



# Open Discussion



# Wrap-Up





## X. Next Steps

- Develop Forecasts for Each Alternative
- Evaluate Alternatives
- Select Preferred Alternative
- Second Round of Public Involvement and Briefings of Elected Officials
- Public Information Meeting
- Brief County Board and City Councils

# Contact

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