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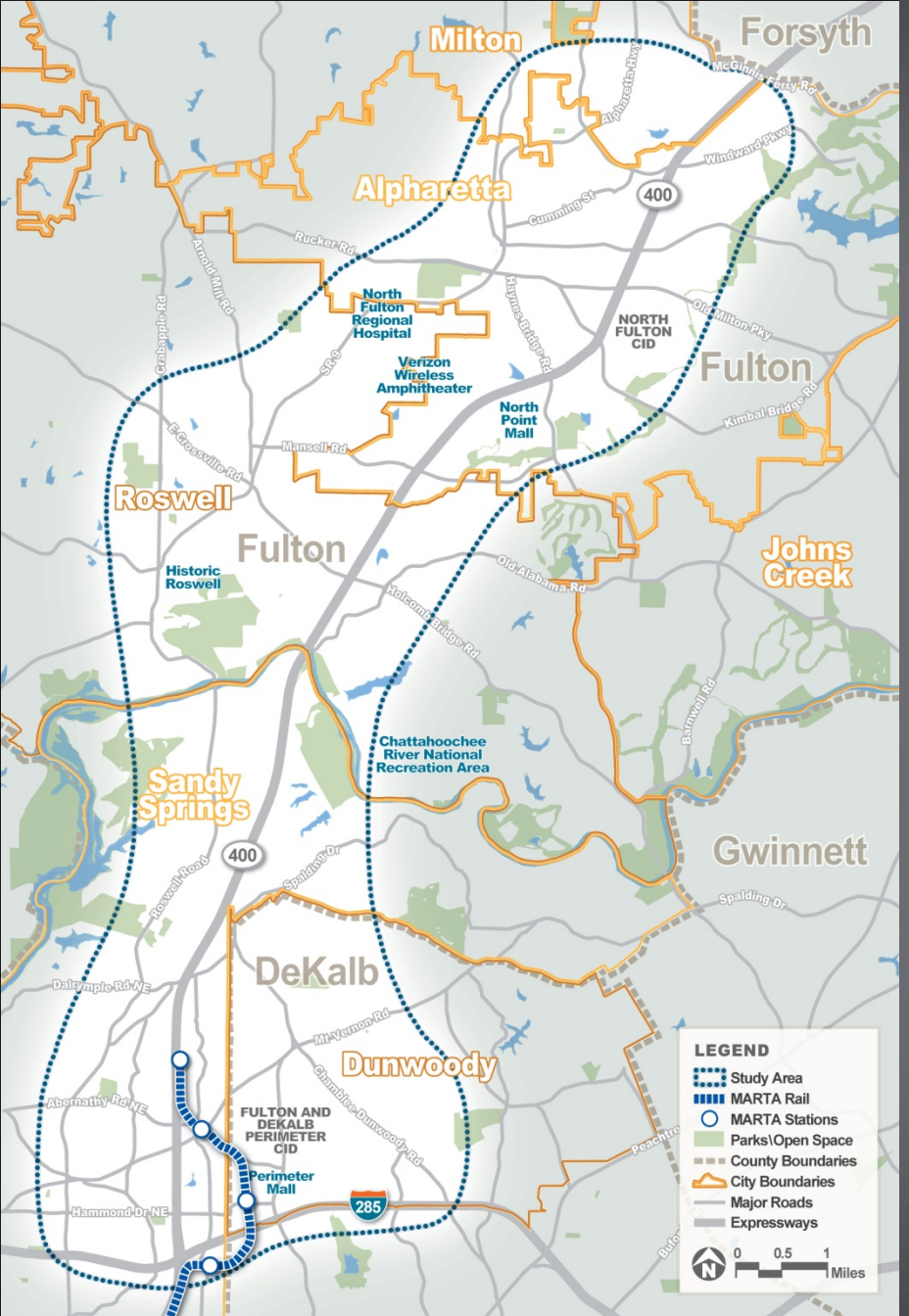
Purpose

- Where We Area
- What We Heard
- The Screening Process and Fatal Flaw
- Overview of Screen 1 Analysis

Where We **Are**



Study Area

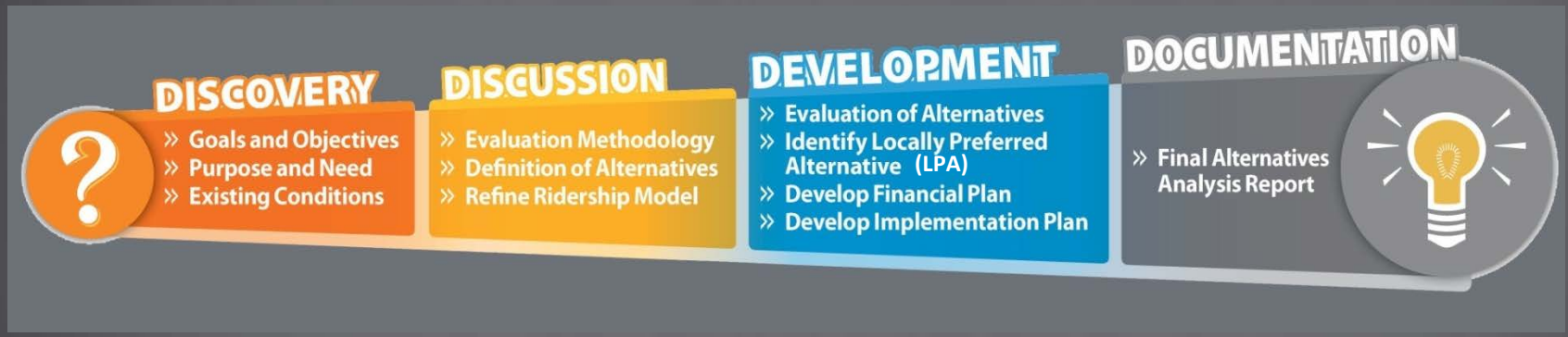
I-285 to McGinnis Ferry

Study area of influence:

- oSandy Springs
- oDunwoody
- oRoswell
- oAlpharetta
- oMilton
- oMountain Park
- oJohns Creek
- oAtlanta
- oDeKalb, Fulton, Gwinnett, Forsyth and Cobb Counties

CONNECT400
GA 400 TRANSIT INITIATIVE

Connect 400 Alternatives Analysis Schedule



2011	2012	2012	2013
Winter	Spring -Summer	Fall-Winter	Spring

We Are Here

Where We **Heard**

Community / Stakeholder Input to date

Alignments:

- GA 400 & SR 9 most appropriate for high capacity transit
- Need east-west transit service to enhance access & increase potential ridership
- Consider use of Encore Parkway to serve the west side of GA 400

Transit Technologies:

- HRT on SR 9 infeasible due to major ROW constraints & community impacts

Stations:

- Potential stations at Holcomb Bridge, North Point Mall, & Windward
  - No large park-and-ride at Holcomb Bridge
- Large park-and-ride is appropriate at the northern terminus
- Need park-and-ride lots along study area periphery

Other:

- Need improvements to the existing bus service
- Stay consistent with local & regional initiatives

The Screening **Process**

Overview of Technical Screening Process

Fatal Flaw Analysis considers at a high level:

- Purpose & Need
- Constructability & right-of-way impacts
- Generalized Technology Assessment

Defined alternatives (combinations of alignment & transit technology) for Screen 1

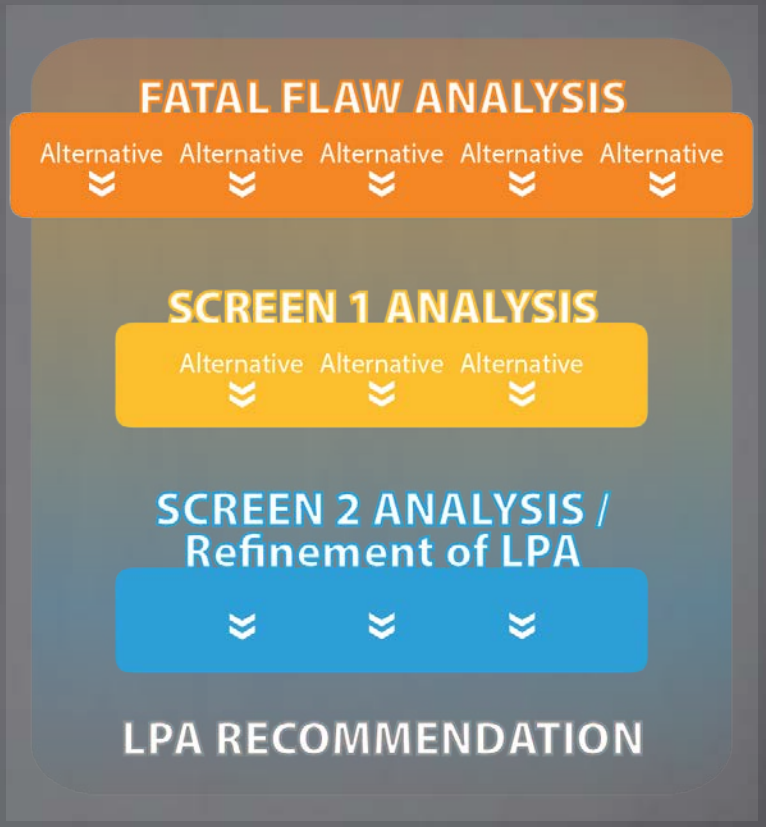
Screen 1 applies both quantitative & qualitative evaluation criteria to reduce the number of alternatives

Smaller set of alternatives advance into Screen 2

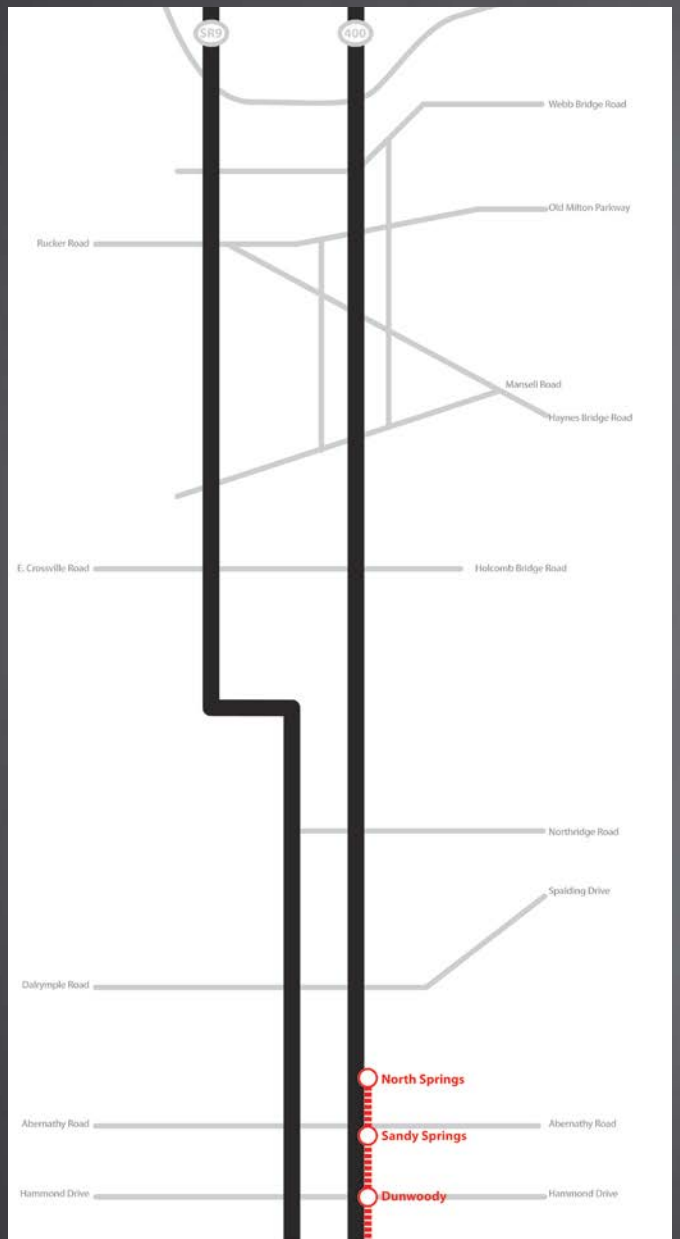
Screen 2 involves a more in-depth analysis using additional performance measures

Screen 2 identifies the LPA

MARTA Board to adopt LPA



State Route 9 & Georgia 400



Fatal Flaw Analysis Overview

- Two major corridors were identified: Georgia 400 and State Route 9
- Six (6) technologies were assessed for the corridors; Three (3) technologies were eliminated

Step 1: Technology Assessment

Heavy Rail
(HRT)

Diesel Multiple Unit
(DMU)

Light Rail/Streetcar
(LRT/SC)

Automated Guideway Transit
(AGT)

Bus Rapid Transit
(BRT)

Bus

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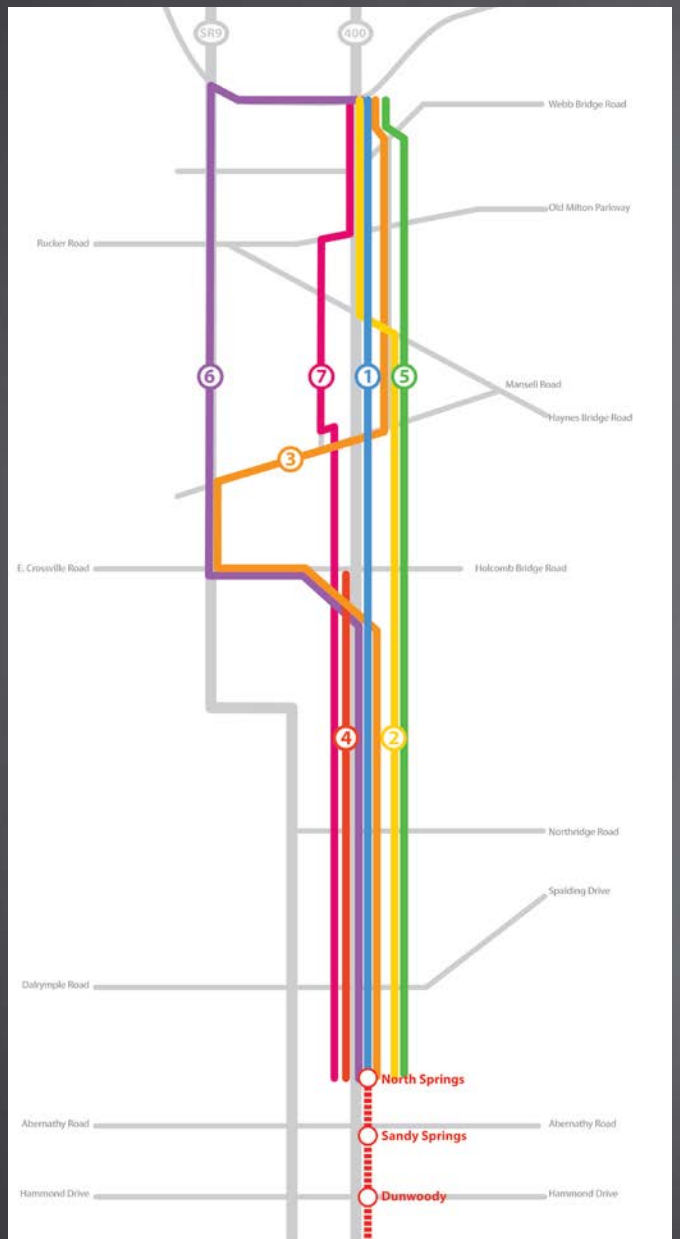
GA 400 TRANSIT INITIATIVE

Georgia 400
Universe of Alternatives



Fatal Flaw Analysis Overview

Step 2: Universe of Alternatives

3 modes + 9 alignments / GA 400 & SR 9

Heavy Rail
(HRT)

Light Rail/Streetcar
(LRT/SC)

Bus Rapid Transit
(BRT)

Georgia 400 Corridor

- **GA 400 – 1**
- **GA 400- 2**
- **GA 400 – 3**
- **GA 400 - 4**
- **GA 400 - 5**
- **GA 400 - 6**

State Route 9 Corridor

- **SR 9 – 1**
- **SR 9 – 2**
- **SR 9 – 3**

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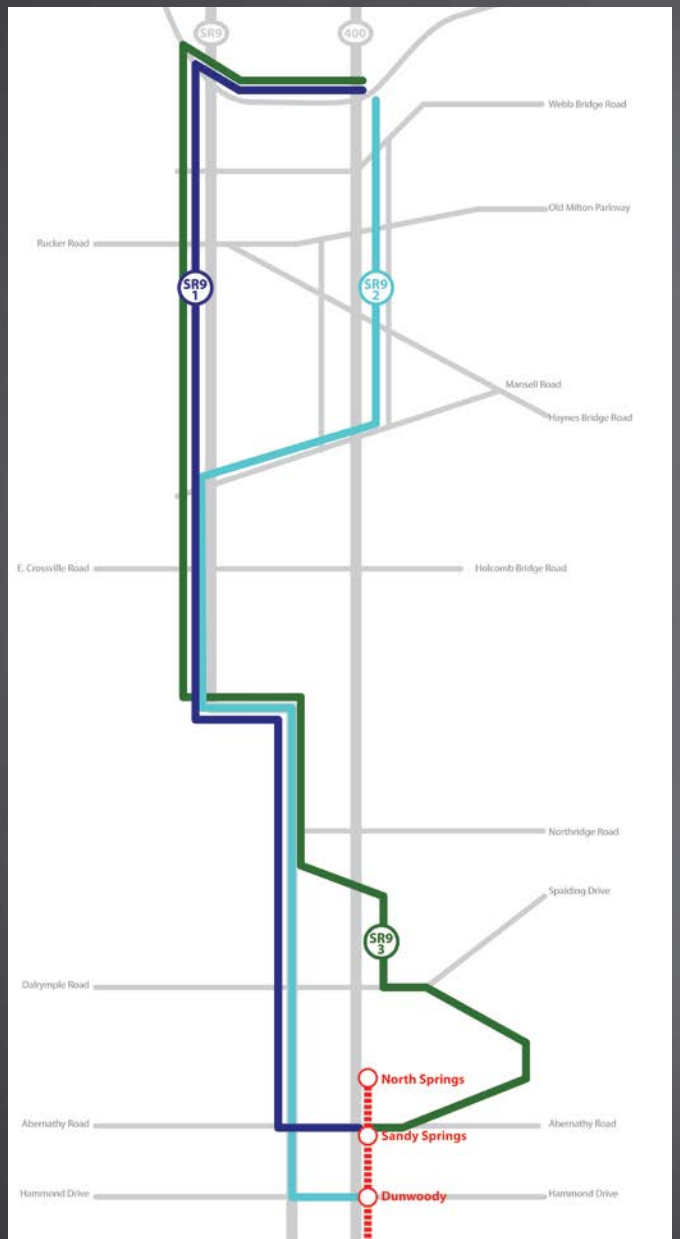
GA 400 TRANSIT INITIATIVE

State Route 9

Universe of Alternatives



Fatal Flaw Analysis Overview

Step 2: Universe of Alternatives

3 modes + 9 alignments / GA 400 & SR 9

Heavy Rail
(HRT)

Light Rail/Streetcar
(LRT/SC)

Bus Rapid Transit
(BRT)

Georgia 400 Corridor

- **GA 400 – 1**
- **GA 400- 2**
- **GA 400 – 3**
- **GA 400 - 4**
- **GA 400 - 5**
- **GA 400 - 6**

State Route 9 Corridor

- **SR 9 – 1**
- **SR 9 – 2**
- **SR 9 – 3**

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GA 400 TRANSIT INITIATIVE

Step 3: Fatal Flaw Analysis

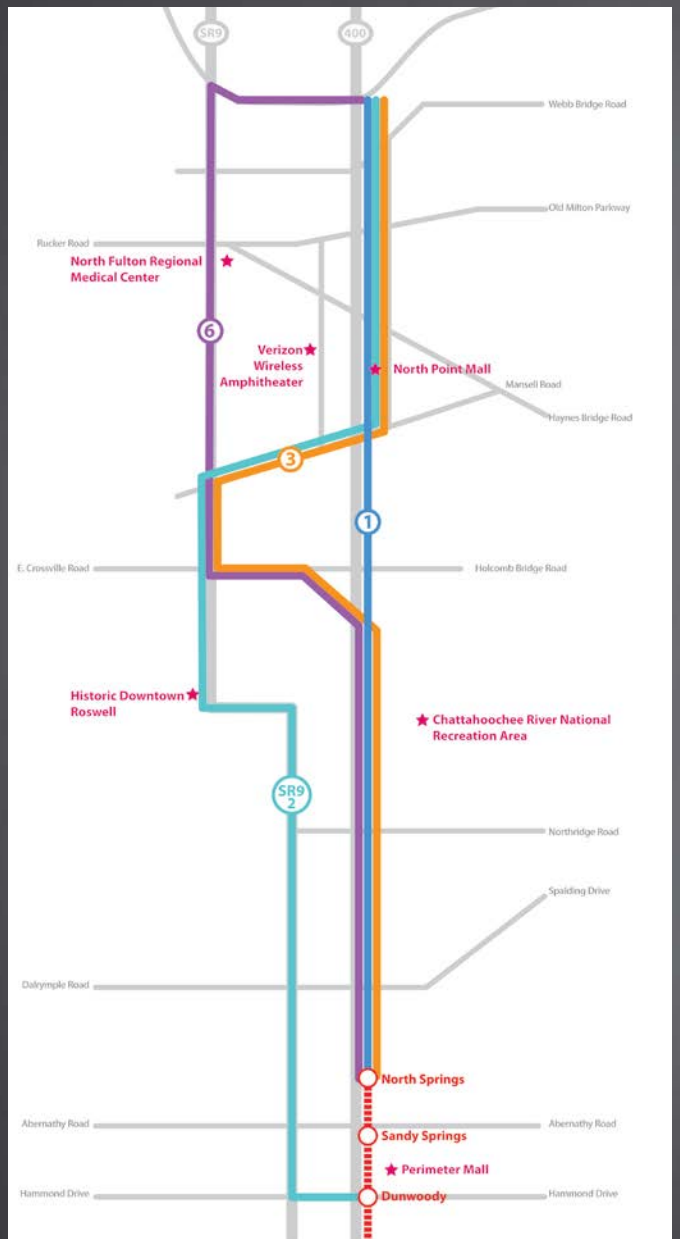
Corridor	Name	Alignment	Technology	Purpose and Need		Constructibility		Fatal Flaw Results	Alternatives Advancing to Screen 1	Rationale for Elimination and/or Modification
				High Capacity Transit	Transit Access	Engineering Constraints/ Costs	Potential Community Impact			
GA 400	GA 400-1	North Springs MARTA Station - GA 400 - Windward Parkway	BRT	2	1	1	2	6	Yes	
			LRT/SC	2	1	0	2	5	Yes	
			HR	2	1	0	2	5	Yes	
	GA 400-2	North Springs MARTA Station - GA 400 - Mansell Road - North Point Parkway - Haynes Bridge Road - GA 400 - Windward Parkway	BRT	2	1	1	1	5	No	Eliminated due to considerable redundancy in alignment. Will be combined with GA 400-1 and regarded as a potential alignment variation for further analysis under Screen 1.
			LRT/SC	2	1	0	0	3	No	
			HRT	2	1	0	2	5	No	
	GA 400-3	North Springs MARTA Station - GA 400 - SR 140 - SR 9 - Mansell Road - North Point Parkway - Windward Parkway	BRT	1	1	1	1	4	Yes	
			LRT/SC	1	1	1	0	3	No	
	GA 400-4	North Springs MARTA Station - GA 400 - SR 140	BRT	2	0	2	2	6	No	Eliminated due to redundancy in alignment. Will be incorporated into GA 400-1 for further analysis under Screen 1. Will be considered during the phasing/implementation plan.
			LRT/SC	2	0	2	2	6	No	
			HRT	2	0	2	2	6	No	
	GA 400-5	North Springs MARTA Station - GA 400 - Mansell Road - North Point Parkway - Windward Parkway	BRT	2	1	1	1	5	No	Eliminated due to considerable redundancy in alignment. Will be combined with GA 400-1 and regarded as a potential alignment variation for further analysis under Screen 1.
			LRT/SC	2	1	0	0	3	No	
			HRT	2	1	0	2	5	No	
	GA 400-6	North Springs MARTA Station - GA 400 - SR 140 - SR 9 - Windward Parkway	BRT	1	1	1	1	4	Yes	
			LRT/SC	1	1	0	0	2	No	
SR 9	SR 9 -1	Sandy Springs MARTA Station - Mt Vernon Highway - SR 9 - Windward Parkway	BRT	1	2	1	0	4	No	Eliminated due to significant impacts to established residential neighborhoods on 2-lane Mt. Vernon Highway.
			LRT/SC	1	2	0	0	3	No	
	SR 9 -2	Dunwoody MARTA Station - Hammond Drive- SR 9 - Mansell Road - North Point Parkway - Windward Parkway	BRT	1	2	1	0	4	Yes	
			LRT/SC	1	2	0	0	3	No	
	SR 9 -3	Sandy Springs MARTA Station - Mt Vernon Highway - Chamblee Dunwoody Road - Pitts Road - SR 9 - Windward Parkway	BRT	1	2	1	0	4	No	Eliminated due to significant Impacts to established residential neighborhoods on various 2-lane roadways through City of Dunwoody.
			LRT/SC	1	2	0	0	3	No	

Rating Scheme: 2 High; 1 Medium; 0 Low. Threshold Score 4

Alternatives to move forward to Screen 1

Georgia 400 and State Route 9

Alternatives for Screen 1



Fatal Flaw Analysis Overview

Step 1: Technology Assessment

- Independent review of 6 modes
- Most appropriate - Bus Rapid Transit (BRT); Light Rail/Streetcar (LRT/SC); Heavy Rail (HRT)

Step 2: Universe of Alternatives

- 3 modes + 9 alignments along GA 400 & SR 9

Step 3: Fatal Flaw Analysis

- Reduce 'universe' to a smaller set for Screen 1
- High-level based on purpose/need & constructability

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GA 400 TRANSIT INITIATIVE

Screen 1 **Analysis & Alternatives**

Introduction / Overview of Screen 1

Applicable Qualitative & Quantitative Measures to Address Goals and Objectives of AA

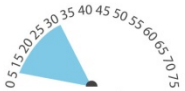
- Mobility
- Accessibility
- Land Use and Development
- Potential for TOD
- Costs
- Environmental Quality
- Community Impacts

Data & Tools Used

- U.S. Census & ARC 2040 Socioeconomic Forecasts
- Geographic Information System (GIS)
- Adopt Local Land Use Plans
- Order of Magnitude Transit Unit Costs
- Department of Natural Resources
- Fulton County Parcel Data

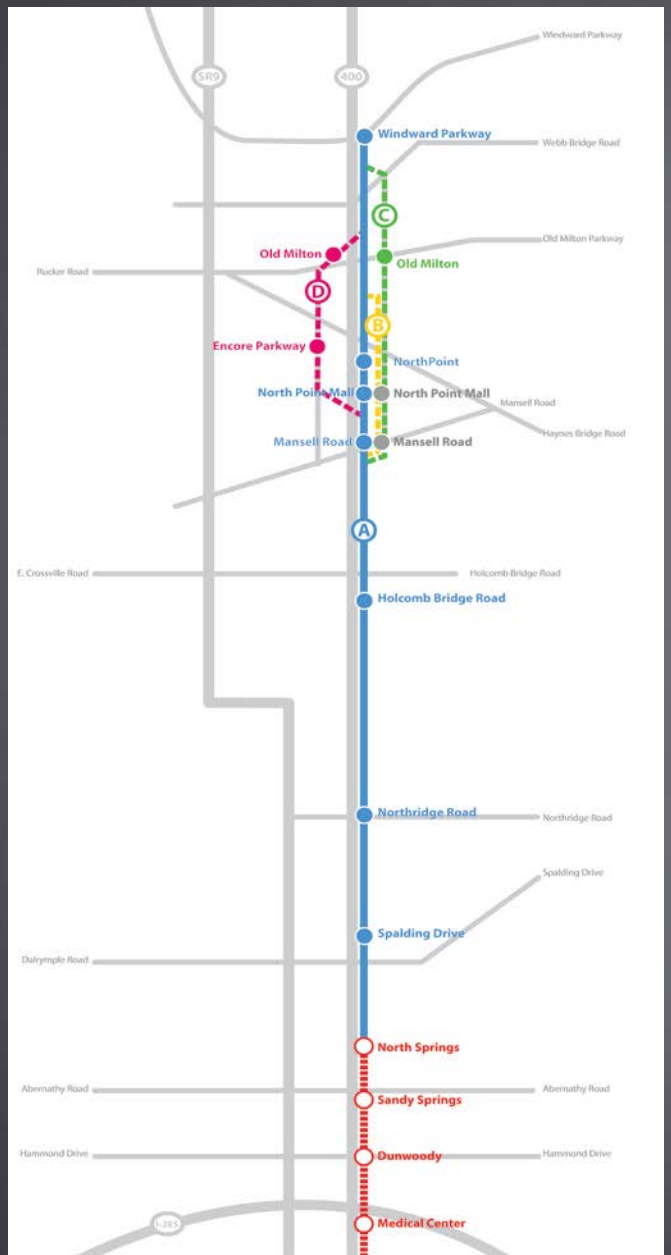
Screen 1 Transit Technologies

Transit Technologies considered for Georgia 400*

	Heavy Rail	Light Rail/Streetcar	Bus Rapid Transit
WHAT IS IT?	High-speed rail cars powered by electric fixed guideway.	Rail cars powered by overhead catenaries.	Enhanced bus using technology to improve speed and reliability
WHERE DOES IT GO?	Typically used to travel to and from urban locations.	Typically used to travel to and from urban locations.	Typically used to travel to and from urban locations.
WHAT IS CONTEXT? / HOW OFTEN DOES IT STOP?	 Corridor with concentrated urban centers	 Corridor with concentrated urban centers and/or suburban centers	 Corridor with dispersed suburban and urban centers
WHAT IS THE MAXIMUM CAPACITY OF THE TRAIN OR BUS?	800 - 1,400 passengers (8-car train)	200 - 500 passengers (single streetcar or 2-car light rail)	45 - 150 passengers
HOW FAST DOES IT GO? *(AVERAGE SPEED)*	 35-50 mph	 10 - 30 mph	 15-30 mph
WHAT ARE THE BALLPARK CAPITAL COSTS? *(MIILIONS/MILE)*	$200-$600	$80-$300	$10-$120
WHAT DOES IT LOOK LIKE?			
WHERE CAN I SEE IT?	Atlanta, Georgia; New York City, New York; Washington, D.C.	Phoenix, Arizona; Dallas, Texas; Charlotte, North Carolina; Portland, Oregon	Boston, Massachusetts; Cleveland, Ohio; Pittsburgh, Pennsylvania

* Other technologies considered included: diesel multiple unit, automated fixed guideway, and bus. These technologies where eliminated in the Fatal Flaw Analysis and outlined in the Technology Assessment Document (see website).

** High level estimates based on other cities and previous studies



Georgia 400 – 1 (A, B, C, D)

Alignment

- 11.9 to 12.7 Miles Long
- North Springs Station – GA 400 – Windward, with options

Transit Technology

- Bus Rapid Transit
- Light Rail/Streetcar
- Heavy Rail

Key Assumptions

- Use of GDOT Transit ROW*
- Most Direct Route
- Fewer Community Impacts
- Integration with other regional transit projects

* GDOT ROW availability on GA 400 to be determined based on Managed Lanes

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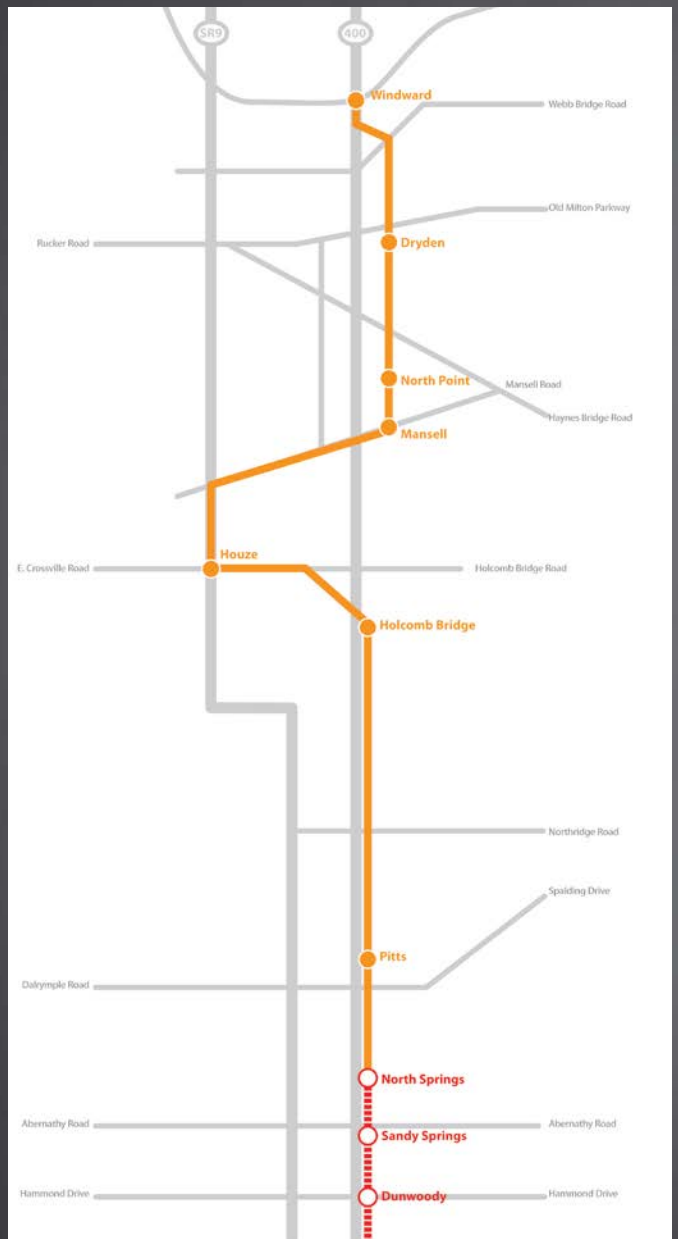
GA 400 TRANSIT INITIATIVE



Georgia 400 - 3

Alignment

- 15.1 Miles Long
- North Springs Station – GA 400 – SR140 – SR9 – Mansell – North Point - Windward

Transit Technology

- Bus Rapid Transit

Key Assumptions

- Use of GDOT Transit ROW*
- Dedicated lanes where feasible on arterials
- Congestion on SR 140
- Grade issues on Mansell crossing GA 400
- Integration with other regional transit projects

* GDOT ROW availability on GA 400 to be determined based on Managed Lanes

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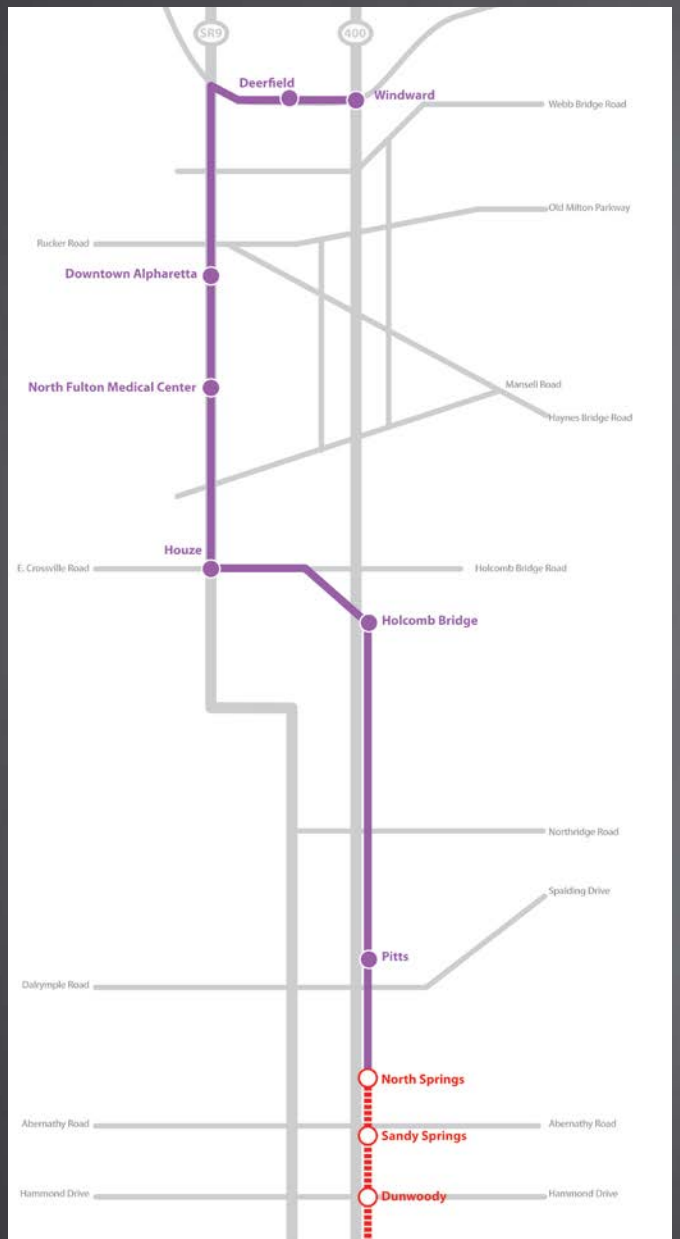
GA 400 TRANSIT INITIATIVE



Georgia 400 - 6

Alignment

- 14.7 miles long
- North Springs Station - GA 400 - SR 140 - SR 9 - Windward

Transit Technology

- Bus Rapid Transit

Key Assumptions

- Use of GDOT Transit ROW*
- Dedicated lanes where feasible on arterials
- Grade/Topography/ Roadway alignment & ROW issues on SR 9
- Integration with other regional transit projects

* GDOT ROW availability on GA 400 to be determined based on Managed Lanes

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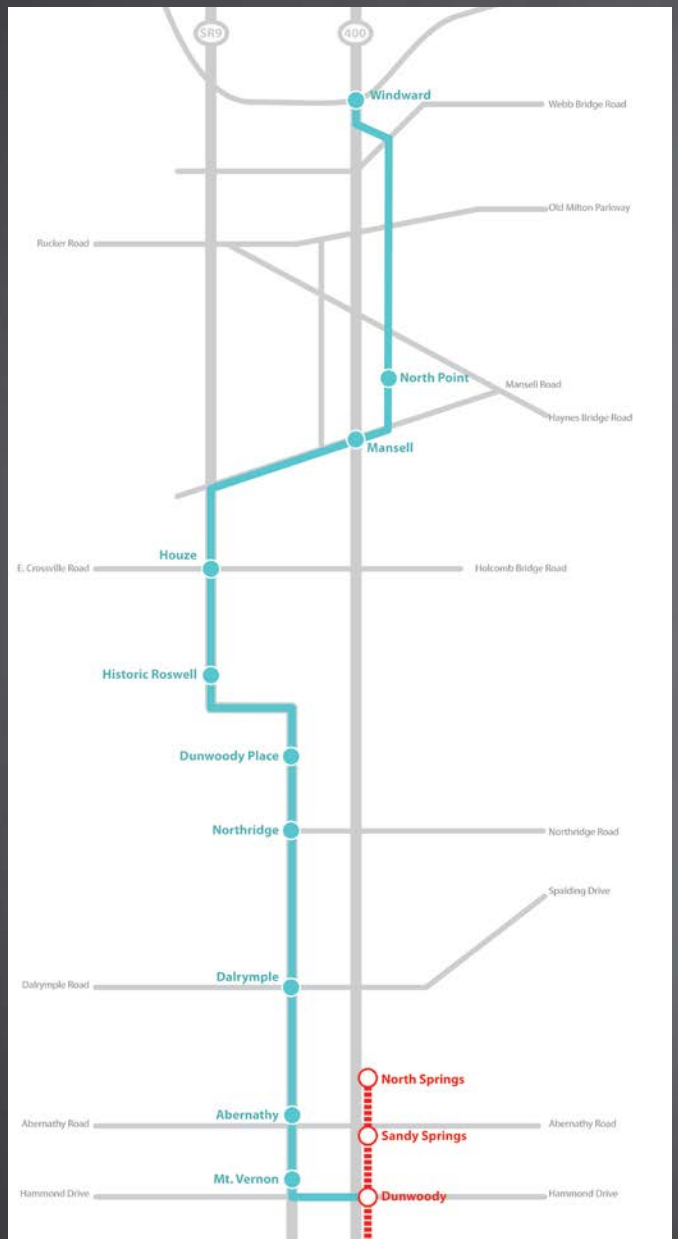
GA 400 TRANSIT INITIATIVE



State Route 9 - 2

Alignment

- 19.6 miles long
- Dunwoody Station - Hammond - SR 9 - Mansell - North Point Pkwy – Windward

Transit Technology

- Bus Rapid Transit

Key Assumptions

- Dedicated lanes where feasible on arterials
- Grade/Topography/ Roadway alignment & ROW issues on SR 9
- Consistent with proposed BRT on Hammond
- Integration with other regional transit projects

What We Have Learned So Far . . .

- ROW along SR-9 will present cost and travel time challenges
- Alignments outside of GA 400 ROW may potentially impact more of the community
- Moderate potential impact to environmental features for all alignments
- HRT and LRT will have highest capital costs
- East-West connecting services will be identified before locally preferred alternative is finalized

Connect 400 **Contact**

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