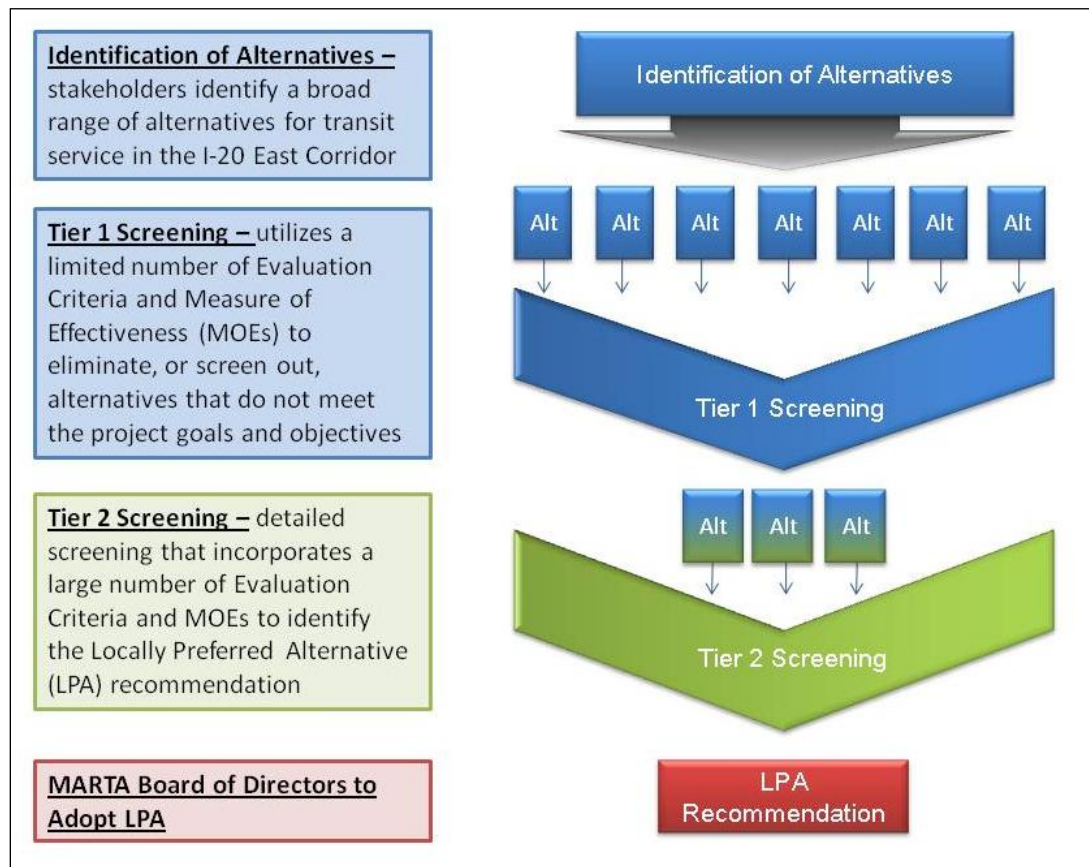


EXECUTIVE SUMMARY

The purpose of this report is to document the results of the Tier 1 and Tier 2 Screening of alternatives for the I-20 East Transit Initiative. The two-tier screening process presented in **Figure ES-1** was utilized to identify and evaluate the proposed transit alternatives using increasingly detailed data and evaluation criteria. The two phases for the development and evaluation of alternatives for the I-20 East Transit Initiative Detailed Corridor Analysis (DCA) were:

- **Tier 1 (Preliminary) Screening** – This phase began with development and evaluation of a broad range of transit alternatives for the I-20 East Corridor. The Tier 1 Screening utilized a limited number of Measure of Effectiveness (MOEs) to eliminate, or screen out, alternatives that did not meet the objectives of the proposed project.
- **Tier 2 (Detailed) Screening** - The result of the Tier 1 Screening was a smaller group of Tier 2 Alternatives that were subject to more detailed evaluation. This screening included a Baseline Alternative and a No Build Alternative. The Tier 2 Screening was both more in-depth and wider in scope than that performed in the Tier 1 Screening and incorporated a high degree of technical analysis with many different MOEs.

Figure ES-1: The DCA Process





Tier 1 Screening

The focus of the Tier 1 Screening was the identification of the best performing alignment and connection alternatives, regardless of transit technology, or mode. The Stakeholder Advisory Committee (SAC) was tasked with identifying transit alignments that would connect activity centers throughout the I-20 East Corridor with central Atlanta and the existing MARTA heavy rail system. The process of identifying transit alignments to be advanced into Tier 2 Screening was comprised of three primary decision points (**Table ES-1** and **Figure ES-2**):

- Mainline Alignment Alternatives: Identification of the best mainline, or corridor level, transit alignments.
- Downtown Connectivity Alternatives: Identification of the best connections into downtown Atlanta.
- Panola Road Area Alternatives: Identification of the best alignments in the Panola Road area.

Table ES-1: Tier 1 Alignment Alternatives

Alternative Type	Alternative Name
Mainline Alternatives	1. Parallel I-20 Alignment
	2. Connection to Edgewood Station
	3. Heavy Rail Extension from Indian Creek
Panola Road Area Alternatives	1. Parallel I-20 Sub-Alignment
	2. Snapfinger Woods Drive Sub-Alignment
Downtown Connectivity Alternatives	1. Connection to King Memorial Station via Memorial Drive
	2. Connection to King Memorial Station and Downtown via Streetcar
	3. Connection to King Memorial Station via Hill Street
	4. Connection to Downtown via Streetcar
	5. Connection to Garnett and Five Points Stations
	6. Connection to Multi-Modal Passenger Terminal/Five Points Stations
	7. Connection to West End Station/Atlanta University Center/Ashby Station
	8. Connection to Midtown via BeltLine Alignment

The Tier 1 Screening utilized a limited number of evaluation criteria and MOEs to evaluate which alternatives best addressed the identified project goals and objectives. All three Mainline Alternatives were advanced to Tier 2 because they all performed well in the evaluation. The only Panola Road Area Alternative that advanced to Tier 2 was the Parallel I-20 Alignment because it performed significantly better than the Snapfinger Woods Drive alignment. Based on the technical evaluation and input from the City of Atlanta, two Downtown Connectivity Alternatives were advanced into Tier 2 Screening. These were the Connection to Garnett and Five Points Stations and the Connection to Midtown via BeltLine Alignment. Despite rating well in the Tier 1 Screening, the Connection to Multi-Modal Passenger Terminal (MMPT)/Five Points Station was not promoted to Tier 2 Screening. First, while this alternative is virtually identical to the Connection to Garnett and Five Points Station alternative, it was projected to incur longer travel times and attract fewer daily riders as well as fewer new riders. Second, with the MMPT in its initial planning stages, there are far too many unknowns about the actual facility to pursue a connection at this time. The results of the Tier 1 Screening are presented in **Table ES-3**.



Figure ES-2: Tier 1 Alignment Alternatives

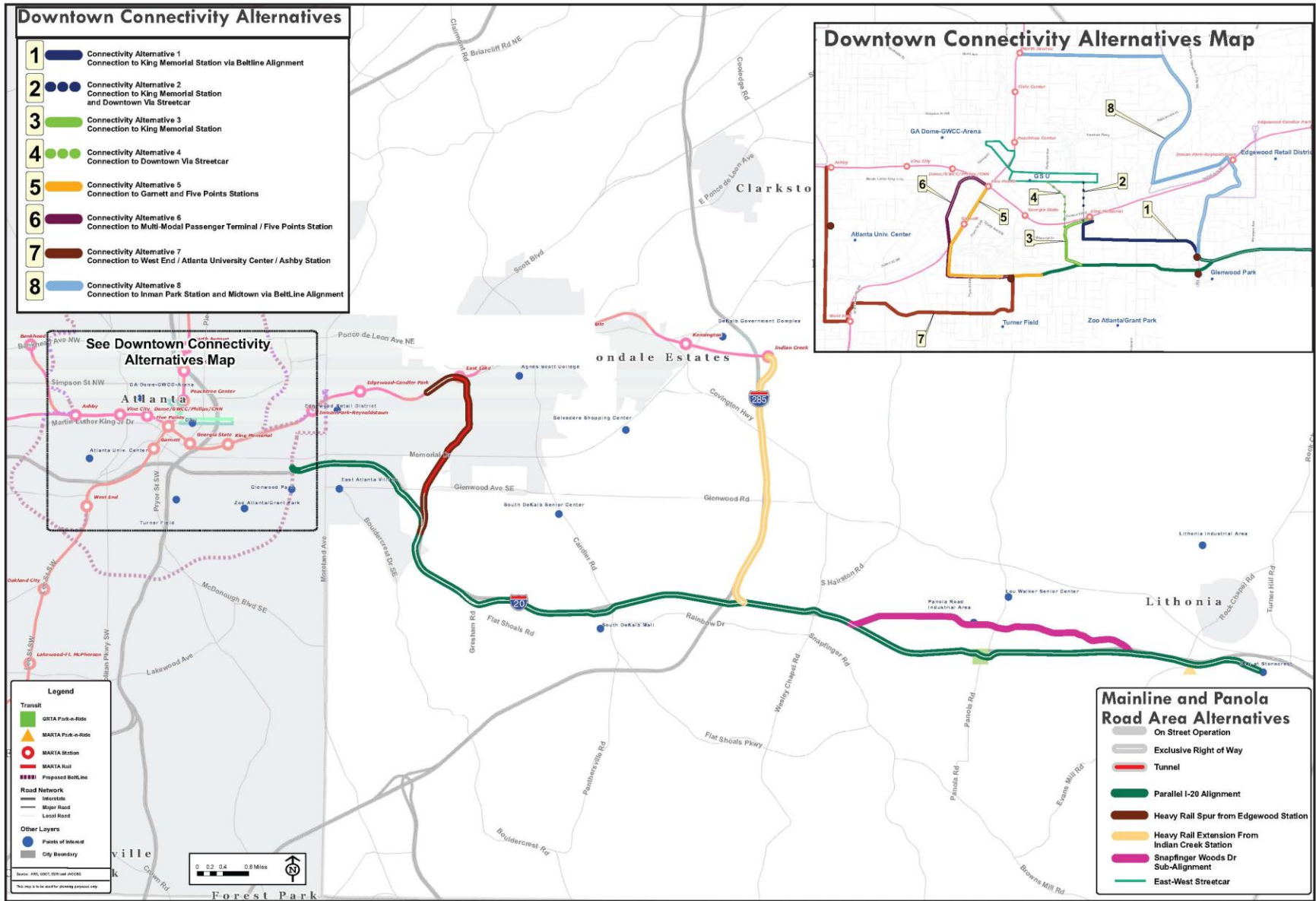




Figure ES-3: Tier 1 Screening Results

Project Goal	Mainline Alternatives			Panola Road Area Alternatives		Downtown Connectivity Alternatives							
	1. Connection Directly to Downtown Atlanta	2. Connection to Edgewood Station	3. Heavy Rail Extension from Indian Creek	1. Parallel I-20 Sub-Alignment	2. Snapfinger Woods Drive Sub-Alignment	1. Connection to King Memorial Station via Memorial drive	2. Connection to King Memorial Station and Downtown via Streetcar Alignment	3. Connection to King Memorial Station	4. Connection to Downtown via Streetcar	5. Connection to Garnett and Five Points Stations	6. Connection to Multi-Modal Passenger Terminal/Five Points Stations	7. Connection to West End Station/ Atlanta University Center/Ashby Station	8. Connection to Inman Park Station and Midtown via Beltline Alignment
Increase Mobility and Accessibility	●	●	●	●	●	●	●	●	●	●	●	●	●
Provide Improved Transit Service within the Corridor	●	●	●	●	●	●	●	●	●	●	●	●	●
Support Land Use and Development Goals	●	●	●	●	●	●	●	●	●	●	●	●	●
Promote Cost Effective Transit Investments	●	●	●	●	●	●	●	●	●	●	●	●	●
Preserve Natural and Built Environment	●	●	●	●	●	●	●	●	●	●	●	●	●
Achieve a High Level of Community Support	●	●	●	●	●	●	●	●	●	●	●	●	●
Advanced to Tier 2 Screening	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	NO	YES

Legend



Performed well



Performed moderately well



Performed poorly

Tier 2 Screening

The Tier 2 Alternatives represented the highest performing Tier 1 Alternatives. The purpose of the Tier 2 Screening was to identify the LPA utilizing a more robust list of evaluation criteria and MOEs. The result of the Tier 1 Screening was a set of feasible transit alignments that would connect activity centers along the I-20 East Corridor with central Atlanta and the existing MARTA heavy rail system. The Tier 2 Screening paired these alignments with compatible transit technologies, or modes. As such, all Tier 2 Alternatives were evaluated with all feasible transit technologies. Thus, if a given alignment was compatible with multiple transit technologies, it was analyzed with each technology. The transit technologies identified as suitable for this project include heavy rail transit (HRT), light rail transit (LRT), and bus rapid transit (BRT), as depicted in **Figure ES-4**. **Table ES-2** presents descriptions of the six Tier 2 Alternatives that resulted from the technology analysis and **Figure ES-5** provides a map of these alternatives.

Figure ES-4: Transit Technologies Considered




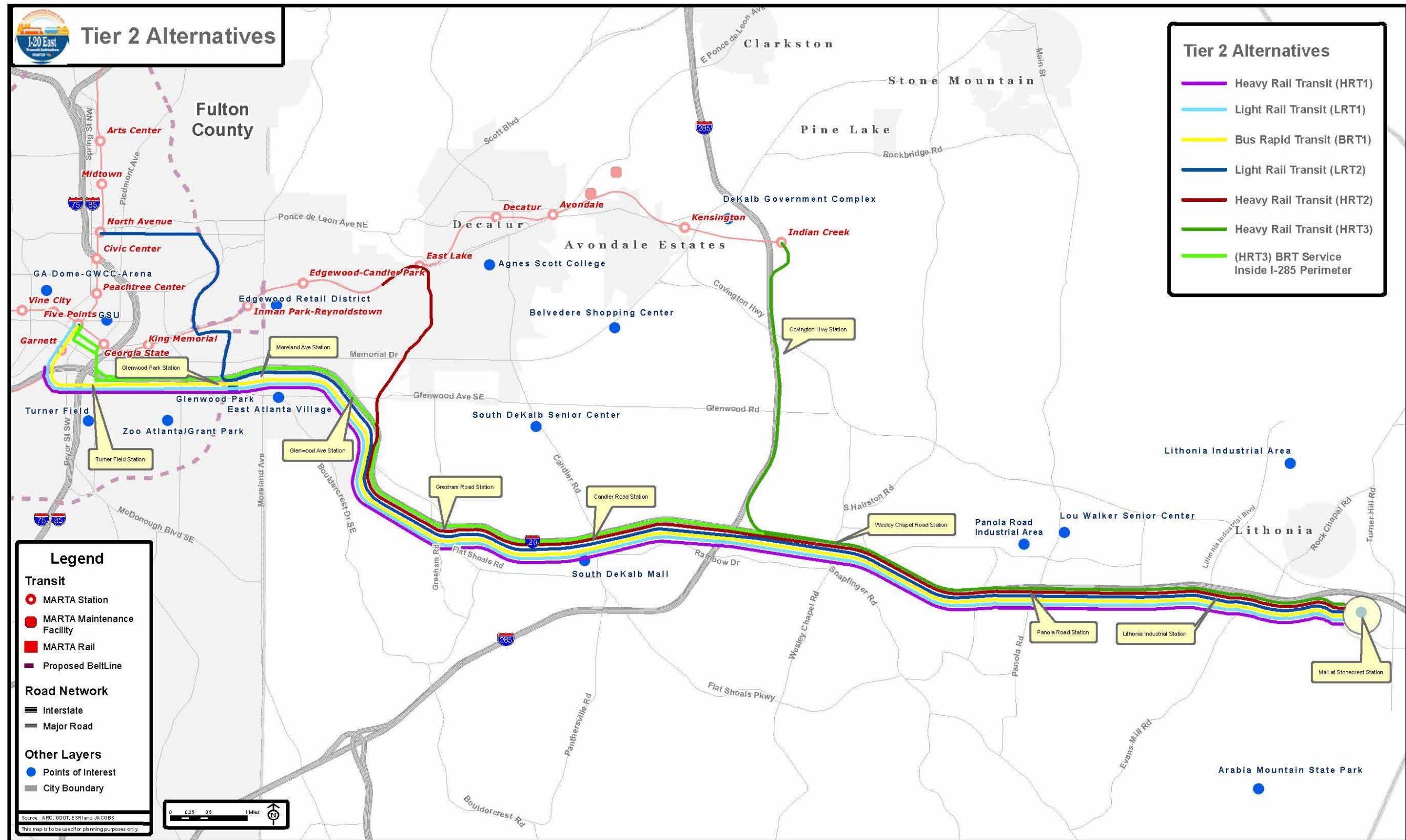
<p>BRT offers limited-stop service that relies on technology to help speed up travel. BRT operates in shared or exclusive right-of-way. This service usually has dedicated stations, pre-boarding fare payment, and is separated from normal traffic.</p>	<p>LRT consists of passenger rail cars powered by overhead catenaries. Operating individually or in short trains, service is usually on fixed rails in exclusive right-of-way. LRT and streetcar service can occasionally operate in shared traffic.</p>	<p>HRT operates on electric railway, and is characterized by high speeds, rapid acceleration of passenger rail cars, high platform loading, and grade separated rights-of-way from which all other vehicular and foot traffic are excluded.</p>
		

Table ES-2: Tier 2 Description of Alternatives

Alternative Name	Description
HRT1	<ul style="list-style-type: none"> Heavy rail transit line from downtown Atlanta, east, adjacent to I-20, to the Mall at Stonecrest
LRT1	<ul style="list-style-type: none"> Light rail transit line from downtown Atlanta, east, adjacent to I-20, to the Mall at Stonecrest
BRT1	<ul style="list-style-type: none"> Bus rapid transit line from downtown Atlanta, east, adjacent to I-20, to the Mall at Stonecrest
LRT2	<ul style="list-style-type: none"> Light rail transit line utilizing BeltLine alignment from North Avenue Station to I-20, then east, adjacent to I-20 to Mall at Stonecrest
HRT2	<ul style="list-style-type: none"> Heavy rail spur from existing MARTA rail line between East Lake and Edgewood Stations, south in a tunnel to I-20, then east, adjacent to I-20 to the Mall at Stonecrest
HRT3	<ul style="list-style-type: none"> Heavy rail transit extension of existing MARTA line from Indian Creek Station, south, adjacent to I-285, then east, adjacent to I-20 to Mall at Stonecrest Areas along I-20 inside the I-285 Perimeter would be served with BRT

Figure ES-5: Map of Tier 2 Alternatives





As part of the Tier 2 Screening cost estimates were developed based on conceptual engineering and realistic operating plans, preliminary station area planning was completed, right-of-way impacts were assessed, and impacts to natural and community resources were identified. Additionally, detailed ridership analysis and calculation of FTA New Starts performance criteria were completed in the Tier 2 Screening. Key findings from the Tier 2 Screening can be found in **Table ES-3**. **Table ES-4** presents the major assumptions considered during alternative development and subsequent analysis. **Table ES-5** presents the evaluation matrix for the Tier 2 Alternatives.

Table ES-3: Tier 2 Comparison of Alternatives

Alternative Name	Alignment Length	Capital and O&M Costs	Daily Boardings	New Transit Riders	# of Displacements
HRT1	19.2 miles	\$3.28B, \$35.2M	41,900	12,300	47
LRT1	19.6 miles	\$2.70B, \$10.4M	33,300	8,200	47
BRT1	19.6 miles	\$2.11B, \$6.4M	27,700	5,200	47
LRT2	20.3 miles	\$2.12B, \$10.4M	18,400	5,300	35
HRT2	18.2 miles	\$2.73B, \$23.8M	32,200	8,200	41
HRT3	12.0 miles (HRT) 12.8 miles (BRT)	\$1.84B, \$18.0M	28,700	6,400	13

Table ES-4: Assumptions

Design Assumptions	<ul style="list-style-type: none"> All new HRT stations would be smaller, simpler stations that will cost less than traditional MARTA HRT stations. No surface street operation or at-grade rail crossings for LRT alternatives with exception of BeltLine alignment for LRT2. Sufficient capacity at existing rail maintenance facilities to maintain HRT vehicles. Sufficient capacity at existing bus maintenance facilities to maintain BRT vehicles. Some additional equipment may be necessary. A new storage and maintenance facility in the I-20 corridor would be required for LRT alternatives.
Capital Cost Estimates	<ul style="list-style-type: none"> All cost estimates are reported in 2011 dollars. Storage and maintenance facilities were only deemed necessary for LRT alternatives. Assumed that HRT and BRT vehicles would be stored and maintained at existing MARTA facilities.
Service Assumptions	<ul style="list-style-type: none"> 10-minute peak and 20 minute off-peak headways. Six trains consists for HRT service. Four train consists for LRT service.
Forecasting Assumptions	<ul style="list-style-type: none"> No HOV or managed lanes along I-20 east of I-285 in year 2030. GRTA express bus service would no longer serve the Panola Road park and ride lot.
Right-of-Way Cost Estimates	<ul style="list-style-type: none"> 80' Required right-of-way assumed for corridor. Property costs based on current assessed value plus escalations factors. Right-of-Way requirements on publicly owned property assumed to have no cost.



Table ES-5: Tier 2 Evaluation Matrix

Project Goal	Project Objective	HRT1	LRT1	BRT1	LRT2	HRT2	HRT3
Increase Mobility and Accessibility	Improve East-West Travel Times	●	●	●	●	●	●
	Improve Transit Accessibility within the Corridor	●	●	●	●	●	●
	Improve Connectivity with Existing and Planned Transit Investment	●	●	●	●	●	●
	Improve Travel Options within the Corridor	●	●	●	●	●	●
Provide Improved Transit Service within the Corridor	Provide Transit Service with Sufficient Capacity to Accommodate Growing Demand	●	●	●	●	●	●
	Provide Travel Time Competitive Transit Service in the Corridor	●	●	●	●	●	●
	Provide Transit Service for Traditionally Underserved Populations	●	●	●	●	●	●
Support Land Use and Development Goals	Promote Economic Development and Revitalization	●	●	●	●	●	●
	Support Adopted Local Land Use Plans	●	●	●	●	●	●
	Encourage Transit Supportive Land Use and Development Patterns	●	●	●	●	●	●
Promote Cost Effective Transit Investments	Provide Transit Service that Can be Implemented, Operated, and Maintained with Available Resources	●	●	●	●	●	●
Preserve Natural and Built Environment	Minimize Impacts to Environmental Resources	●	●	●	●	●	●
Achieve a High Level of Community Support	Maintain Compliance with Stakeholder Guidance	●	●	●	●	●	●
	Achieve a High Level of Public Support	●	●	●	●	●	●

Legend



Performed well



Performed moderately well



Performed poorly