

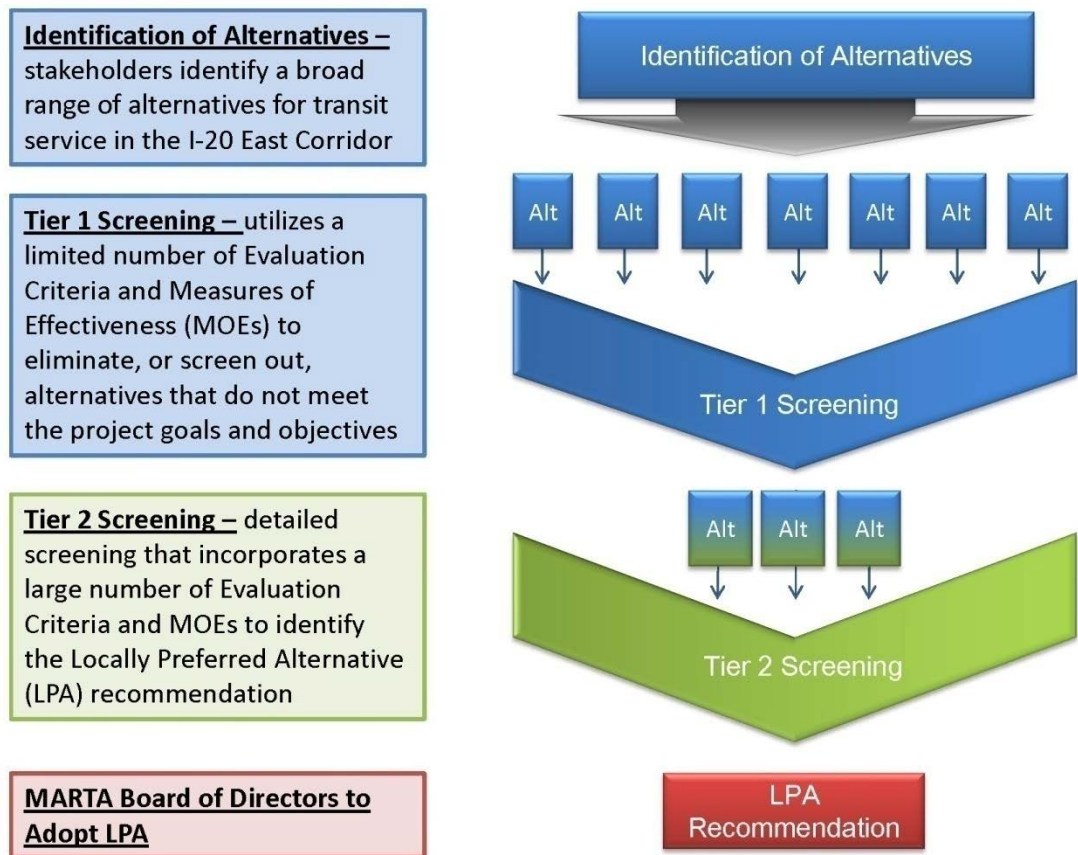
3.0 EVALUATION FRAMEWORK

The methodology used to identify and evaluate the proposed transit alternatives was a two-tiered process in which alternatives were evaluated using increasingly detailed data and evaluation criteria (Figure 3-1 below). The two phases for the development and evaluation of alternatives for the I-20 East 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 MOEs to eliminate, or screen out, alternatives that do not meet the objectives of the proposed project.

Tier 2 (Detailed) Screening - The results of the Tier 1 Screening became the 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 3-1: The Alternatives Analysis Process





3.1 Tier 1 Screening

The first step in the alternatives development and screening process was the identification of feasible alternatives. The Tier 1 Screening considered a limited number of evaluation criteria and MOEs to determine the transit alignment alternatives that best met the goals and objectives of the project. The highest performing Tier 1 Alternatives were advanced to the Tier 2 Screening. As explained in the *Definition of Alternatives Report*, the Tier 1 Alternatives were divided into three groups.

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

3.2 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. These MOEs provide for quantitative analysis results and qualitative public input. The result of the Tier 1 Screening was a set of feasible transit alignments that would connect activity centers along 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. 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 HRT, LRT, and BRT.

During the development of Tier 1 and Tier 2 Alternatives, a No Build Alternative and a Baseline/Transportation System Management (TSM) Alternative were developed as required by the FTA's New Starts process. These were evaluated along with the Tier 2 Build alternatives and are defined as follows:

- **No Build Alternative** – The No Build Alternative represents future transportation conditions if no investments are made beyond transportation projects that are already planned and committed in the Atlanta region's fiscally constrained long-range transportation plan. As such, it serves as the base case against which each of the other alternatives is compared.
- **Baseline/TSM Alternative** – The Baseline/TSM Alternative consists of lower cost transit improvements that attempt to serve the project purpose and need. It is aimed at serving similar markets by incorporating cost effective improvements with an emphasis on transportation system upgrades. This lower cost alternative was compared to the Build alternatives as described in Section 6.0. Unlike the improvements contained in the No Build Alternative, no funding has been identified for the Baseline/TSM Alternative. This alternative is usually selected as the baseline scenario for New Starts applications to the FTA.

3.3 Identification of Evaluation Criteria

This section presents the evaluation criteria and MOEs that were utilized to evaluate and compare alternatives in the Tier 1 and Tier 2 Screenings. The evaluation criteria and MOE's are presented in **Table 3-1** on pages 3-3 and 3-4. As described previously, the project alternatives will be evaluated in a two-tiered process in which alternatives are analyzed using



increasingly detailed data and evaluation criteria. As shown in Table 3-1, the evaluation criteria and MOEs utilized in the Tier 1 Screening are a subset of those utilized for the detailed evaluation in the Tier 2 Screening. Since the Tier 2 Screening is a detailed evaluation of the final alternatives, significantly more evaluation criteria and MOEs will be utilized to measure the effectiveness of the alternatives to address the identified project goals and objectives.

The identification of useful evaluation criteria requires that the purpose and need are well defined and the goals and objectives of the project are clearly outlined. The evaluation process has been designed to evaluate how well each alternative address the identified project goals and objectives. MOEs are the specific and detailed measures established for each evaluation criterion for the purpose of measuring the performance of the alternatives.

Table 3-1: Evaluation Criteria and Measures of Effectiveness

Goal 1: Increase Mobility and Accessibility				
Objective	Evaluation Criteria	Measure of Effectiveness	Tier 1 Screening	Tier 2 Screening
Improve East-West Travel Times	Travel Times	Transit Travel Times from Stonecrest to Five Points Station	X	X
		Transit Travel Times from Stonecrest to Arts Center Station	X	X
		Reduction in VHT		X
		Number of transfers per linked trip		X
Improve Transit Accessibility within the Corridor	Proximity of transit to corridor residents, employment, and special destinations.	Households with new access to transit*		X
		Employment within ½ mile of new stations that is not within ½ mile of existing MARTA rail stations		X
		Special destinations (major retail, entertainment, & university) within ½ mile of stations		X
Improve Connectivity with Existing and Planned Transit Investments	Connections to Existing and Planned Transit	Connection to Concept 3 Rapid Transit Service		X
Improve Travel Options within the Corridor	Additional Travel Options	New Travel Mode/Facility		X
Goal 2: Provide Improved Transit Service within the Corridor				
Objective	Evaluation Criteria	Measure of Effectiveness	Tier 1 Screening	Tier 2 Screening
Provide Transit Service with Sufficient Capacity to Accommodate Growing Demand	Transit System Ridership	Total Transit Boardings	X	X
		Transit Mode Share		X
		New Transit Riders	X	X
Provide Travel Time Competitive Transit Service in the Corridor	Transit Travel Times	Difference between transit travel times and auto travel times between the Mall at Stonecrest and Five Points		X
Provide Transit Service for Traditionally Underserved Populations	Proximity to Underserved Populations	Zero car households with new access to transit*		X
		ADA population with new access to transit*		X
		Minority population with new access to transit*		X
		Number of low-income households with new access to transit*		X
		Elderly population with new access to transit*		X



Goal 3: Support Land Use and Development Goals				
Objective	Evaluation Criteria	Measure of Effectiveness	Tier 1 Screening	Tier 2 Screening
Promote Economic Development and Revitalization	Proximity of Underutilized Land	Acres of vacant or underutilized land within ½-mile of transit stations/stops	X	X
Support Adopted Local Land Use Plans	Land Use Plans	Consistency with adopted local and regional plans		X
Encourage Transit Supportive Land Use and Development Patterns	Potential for TOD	Acres of transit-supportive future land uses within 1/2 mile of new stations/stops		X
		Acres of transit-supportive existing land uses within 1/2 mile of new stations/stops	X	X
Goal 4: Promote Cost Effective Transit Investments				
Objective	Evaluation Criteria	Measure of Effectiveness	Tier 1 Screening	Tier 2 Screening
Provide Transit Service that Can be Implemented, Operated, and Maintained with Available Resources	Cost and Cost Effectiveness	Capital costs (Stations, transitways, tracks, vehicles, and maintenance facilities) and right-of-way costs in \$millions	X	X
		Operating and maintenance costs in \$millions	X	X
		Deliverability Risk		X
		Cost Effectiveness Index (CEI)		X
		Incremental cost per new rider		X
Goal 5: Preserve Natural and Built Environment				
Objective	Evaluation Criteria	Measure of Effectiveness	Tier 1 Screening	Tier 2 Screening
Minimize Impacts to Environmental Resources	Impact to community, cultural, and natural resources	Community Impacts (neighborhoods, churches, schools, community centers, etc.)		X
		Natural environmental impacts (streams, wetlands, T&E species, etc.)		X
		Cultural impacts (historic and archaeological resources)		X
		Total residential and commercial displacements	X	X
Goal 6: Achieve a High Level of Community Support				
Objective	Evaluation Criteria	Measure of Effectiveness	Tier 1 Screening	Tier 2 Screening
Provide Transit Investments that are Supported by Local Stakeholders and the General Public	Maintain compliance with stakeholder guidance	Compliance with SAC Guiding Principles	X	X
	Achieve a high level of public support	Degree of Public Support (percent of votes for Mainline, Downtown Connectivity, and Panola Road Alternatives)	X	
		Average Survey Score (on a scale of 1-5) for respondents living east of I-285		X
		Average Survey Score (on a scale of 1-5) of respondents living west of I-285		X

*within two miles of Collector or Commuter Town Center Stations or within one-half mile of Town Center and Special Regional Destination Stations and not within ½ mile of existing Urban Core, Neighborhood, or Town Center Stations nor within two miles of existing Commuter Town Center or Collector stations.