

AREA OF INFLUENCE (AOI) GUIDEBOOK:

INTRODUCTION

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Prepared For:

**Georgia Regional Transportation Authority
245 Peachtree Center Avenue, NE, Suite 900
Atlanta, Georgia 30303-1223
404-463-3000**

Prepared Under Contract By:

**Jerry Weitz, Ph.D., AICP
Jerry Weitz & Associates, Inc.
Planning & Development Consultants
1045 Mid Broadwell Road
Alpharetta, Georgia 30004
770-751-1203**

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The objective of this project is to identify data sources and provide appropriate methods to be used by Development of Regional Impact (DRI) applicants in complying with the “Area of Influence” (AOI) and related provisions of GRTA’s rules for the review of DRI applications (see “Procedures and Principles for GRTA Review of Developments of Regional Impact”).

The guidebooks are publicly available to DRI applicants. If the guidebook methods and data sources for AOI analyses are followed, DRI applicants will experience a speedier review process than if methods and data sources must be debated, revised, and resubmitted during the DRI application review process.

The guidebooks are intended to “demystify” GRTA’s complex rules for AOI analyses. They take a “minimalist” approach, in that the basic methods described are considered the absolute minimum necessary for rule compliance. Past DRI applications have demonstrated a number of approaches and provided data that, while not required, are considered very useful in GRTA’s decision-making process. For that reason, the guidebooks provide in selected places information about how to supply “supplemental” data. Supplemental data refer to numbers and analyses that are not essential to determining compliance with GRTA’s rule criteria, but are still informative. DRI applicants are required to submit general data, where called for in the guidebooks.

SUMMARY OF AOI GUIDEBOOKS

The AOI Guidebook is a series of separate project deliverables described below. The usefulness of the project deliverables depends on whether the DRI applicant is pursuing “expedited review” or “non-expedited review.” Table 1 shows the titles of the guidebooks. The various guidebooks are interlocking, with cross-references where appropriate.

**Table 1
AOI Guidebooks by Type of Review**

Expedited Review	Non-Expedited Review
Introduction	Introduction
AOI Guidebook for Expedited Reviews	AOI Guidebook for Non-Expedited Reviews
Data Analysis Report for Expedited Reviews	Data Analysis Report for Non-Expedited Reviews
Supplemental Data Analysis and Reporting	Supplemental Data Analysis and Reporting

GRTA RULE AUTHORITY

In 2002, the Georgia Regional Transportation Authority (GRTA) adopted administrative rules titled Procedures and Principles for GRTA Development of Regional Impact (DRI) Review (i.e.,

“GRTA’s rules”). GRTA has legislative responsibilities to review DRI applications for land use, transportation, and air quality impacts. GRTA’s rules for DRI analyses include the requirement that applicants analyze characteristics of the proposed DRI within the context of its “Area of Influence” (AOI), which is generally an area located within 6 road-miles from the proposed DRI.

CONTEXT

The framework for the DRI process was initially established in the Georgia Planning Act of 1989. That law and subsequent rules adopted by the Georgia Department of Community Affairs (DCA) established an overarching procedural framework within which GRTA’s reviews fit. DCA’s rules call for local governments to implement DRI review procedures. When a local government receives an application for development meeting the definition (thresholds) of a DRI, the local government with jurisdiction submits information about the proposed development to the Regional Development Center (RDC) with jurisdiction. Upon notice of a proposed DRI and the submission of information by the local government, the RDC makes a determination of whether or not the DRI is in the best interest of the state.

GRTA’s rules for DRIs were adopted as a separate but coordinated process. GRTA’s DRI jurisdiction includes only those areas that have “nonattainment” status with regard to the Clean Air Act Amendments and implementing rules. As of April 2003, the jurisdiction of GRTA’s rules is the nonattainment area which includes the 10-county jurisdiction of the Atlanta Regional Commission (Cherokee, Clayton, Cobb, Dekalb, Douglas, Fayette, Fulton, Gwinnett, Henry, and Rockdale). Paulding, Coweta, and Forsyth are the other nonattainment counties under GRTA’s jurisdiction. The applicability of GRTA’s rules will be automatically extended to any areas that are subsequently designated as “nonattainment” with regard to the state’s air quality plan and federal air quality standards.

WHY AOI ANALYSES ARE NEEDED

Air quality is impacted by vehicles (automobiles, trucks, motorcycles, etc.). Vehicle emissions increase as the number of vehicle trips, the lengths of such vehicle trips, and congestion increase. Congestion and other transportation issues can be managed by (1) supplying more transportation facilities and/or (2) attempting to modify the demand for transportation facilities. The AOI provisions of GRTA’s rules attempt to modify the demand for existing transportation

facilities. Other parts of GRTA's rules emphasize road improvements that will mitigate off-site impacts of the DRI (i.e., marginal increases to the supply of transportation facilities). Other efforts of GRTA, such as transportation improvement programs, also address the supply of transportation facilities.

AOI ANALYSES ARE MORE THAN TRANSPORTATION ENGINEERING

For purposes of meeting GRTA's rules, DRI applications are often prepared primarily by traffic engineers, because the rules require trip generation studies, analyses of road and intersection capacities, and the identification of any deficiencies created if the DRI application were approved. While such tasks are the purview of traffic engineers and transportation planners, the rules that require AOI analyses are generally beyond the professional training of traffic engineers and transportation planners. Such professionals do not always have experience in terms of the methods and data sources needed to analyze land use, demographics, housing affordability, labor force participation, and employment in relation to their transportation impacts. Accordingly, while traffic engineers are likely to be assigned overall management responsibilities for preparing DRI applications, the participation of other professional disciplines (e.g., market analysts, demographers, land use planners, and housing analysts), is required in order to effectively complete the AOI analyses required by GRTA's rules.

DATA THAT DRI DEVELOPERS ALREADY COLLECT AND ANALYZE

DRI applicants propose their projects only after they and their lenders are convinced that the real estate market will support the development product or products (e.g., office space, dwelling units, etc.). To ensure development feasibility, developers study real estate market supply and demand. It is not unusual for developers to solicit or conduct detailed analyses of how their proposed large-scale development will be responsive to market demands and will not result in the oversupply of any given development product. Such analyses often include investigations of the income of the population, characteristics of the labor force, and existing (competing) development within the market area.

ADDITIONAL DATA FOR AOI ANALYSES

GRTA's rules necessitate that developers make market information part of the public record, and expand upon such information, so that public decision-making processes on DRIs can be informed by such analyses. In many ways, GRTA's rules require the submittal of information and analyses that go well beyond what large-scale developers would normally submit to public agencies with authority over land development. That is, while developers normally collect market data to justify the economic feasibility of their projects, they do not typically analyze and present to public agencies the data in a way that is useful in the decision-making process. GRTA's rules for DRIs are partially in response to that lack of information. GRTA's rules serve essential public purposes, because the required analyses help decision-makers understand the specific land use impacts of DRI proposals and how the DRI may affect travel patterns in the surrounding area (i.e., the AOI).

IMPACTS OF DRIS

Large-scale developments (usually called DRIs) have substantial impacts on transportation systems. DRIs may include residential living opportunities (e.g., single-family homes, townhouses, apartments, etc.). Many people who reside in large-scale developments proposed as DRIs are in the labor force and will have to work somewhere. They might be employed within the DRI itself, but chances are greater they will be employed somewhere off-site (not in the DRI). If a DRI is approved and constructed, and if the workers who live in the DRI are not employed on-site or near the DRI (i.e., within 6 miles), then they may experience longer commute times and distances. Longer commute times contribute to air pollution and traffic congestion. Hence, it is important to gauge the potential for residents of the DRI to work on-site and in nearby locations, and to consider the availability of employment opportunities in reaching a decision about whether to approve a particular DRI application.

When a DRI includes non-residential uses (e.g., offices, retail commercial, etc.), it creates employment opportunities. The workers who fill jobs in the DRI have to live somewhere. They might be able to find appropriate, affordable housing within the DRI itself. Indeed, this is a goal of GRTA, to increase the mixes of land uses in DRIs so that vehicle miles traveled (VMT) will be reduced. If the workers cannot find appropriate and affordable housing within the DRI, or in the

AOI, the probability is high that those workers will have to travel longer distances and experience longer commute times between the DRI employment center and their residences. This, too, is counter to GRTA's objectives of reducing VMT. In short, GRTA's rules are intended to encourage shorter vehicle trips, in terms of both distance and travel time. Hence, in reviewing DRIs, it is important to gauge the potential for workers to live in the DRI and the AOI, and to consider the availability of residential living opportunities in reaching a decision about whether to approve a particular DRI application.

GRTA's goals, objectives, and rules are predicated on the principle that land uses within proposed DRIs should be modified to reduce trip making and VMT. In general, this means a mixing of land uses in a particular DRI, because it has been shown that mixed-use development can reduce trip generation by 20 to 25 percent when compared to stand-alone, single-use development (Stover and Koepke 1988).¹ For instance, the following excerpt from Stover and Koepke (1988) relative to "dual-purpose" trips states:

When an activity center is developed with a mix of different land uses (e.g., retail and office), there are fewer trips on and off the site than if the retail and office activities were developed on separate sites. In a mixed-use development, some individuals will complete two or more purposes without leaving the site. For example, some of the lunch and shopping trips by office workers will be satisfied at on-site retail establishments. Some visitors to the offices also will complete shopping trips within the development.

GRTA rules are also predicated on the principle that public decisions involving large-scale development must be informed by analyses of the relationship of the proposed DRI to its AOI. Gathering and analyzing data on the population, housing, jobs, and land uses in the AOI help the DRI applicant and public officials with review authority to understand how the proposed DRI will relate to its larger geographic area.

The AOI requirements and other aspects of GRTA's DRI rules are complex, and the data required to accurately comply with AOI requirements are not immediately evident or in some cases not readily available. Complying with the AOI requirements requires substantial data

¹ Stover, Vergil G., and Frank J. Koepke. 1988. Transportation and Land Development. Washington, DCA: Institute of Transportation Engineers. Stover and Koepke (1988, 47) find as follows. "Unpublished data collected at a mixed-use (office, retail, and hotels) development in Southern California which contains approximately 5 million square feet indicated that total trip generation was nearly 20% less than the number of trips which would be generated by the same uses developed stand-alone." They also find that the Colorado-Wyoming Section of the Institute of Transportation Engineers conducted surveys at mixed-use centers and based on interviews found that trip generation of mixed-use developments might be 20% or 25% lower than stand-alone development.

collection and carefully considered analyses for which the metrics have not been fully articulated.

GUIDANCE IN COLLECTING DATA

AOI analyses call for substantial collection of data from many different sources. Some of these data sources are better than others (i.e., more accurate, more timely, and more representative or indicative of the impacts that concern GRTA). GRTA staff and DRI applicants need guidance on what data sources are available and which data sources are considered reliable and acceptable to GRTA staff. The guidebooks identify and assess data needed to conduct AOI analyses.

GUIDANCE IN APPLYING METHODS

Practitioners are largely unfamiliar with how to conduct AOI analyses. Methods of conducting AOI analyses are not specified in detail by GRTA's rules, nor has anyone (prior to these guidebooks) established general (not project-specific) methods for conducting such analyses. The guidebooks respond to this need to apply methods of investigating jobs-housing balance by providing step-by-step guidance to DRI applicants in conducting AOI analyses.

GUIDANCE IN DETERMINING ACCEPTABLE ASSUMPTIONS

Conducting AOI analyses requires DRI applicants to make many different assumptions. For instance, how does a DRI applicant estimate the types of households that will reside in a DRI once complete, and how can one estimate their incomes, employment, and housing needs? When data are not available, or they are too costly or time-consuming to gather, practitioners use "assumptions," "rules of thumb," and "shortcuts." DRI applicants need guidance on what types of assumptions are (or are not) acceptable when conducting AOI analyses. The guidebooks underscore assumptions made (or needed) and recommend those assumptions for AOI analyses that are summarily acceptable to GRTA staff.

ACKNOWLEDGMENT OF WORK BY DRI CONSULTANTS

The guidebooks have been prepared after review of certain project-specific AOI analyses. Where applicable, the guidebooks borrow from those prior studies and apply their methods and data sources. The guidebooks provide methods and data sources that have been derived independently from any one project-specific DRI application.

GRTA's rules for DRIs require certain analyses that will inform decisions on whether DRI applications are consistent with GRTA's goals and objectives, including improved regional mobility, improved air quality, reduction of vehicle trips, reduction of increases in vehicle miles traveled (VMT), and efficient use of limited state and federal funds for land transportation services and access improvements. The guidebooks provide methods and data sources for complying with selected parts of Article 3 of GRTA's rules, "DRI Review Criteria." GRTA reviews the development characteristics and site plan features of all DRIs within its jurisdiction to determine the extent to which they can meet one or more criteria.

DRI review criteria are divided into two types: expedited, and non-expedited.

EXPEDITED REVIEW (RULE SECTION 3-102)

There are four criteria that a DRI application may meet in order to qualify for expedited review. If the applicant can meet any one of them, the DRI qualifies for expedited review:

(1) Limited Daily Trip Generation. The DRI is projected to generate less than 1,000 daily trips (3-102.B);

(2) Mixed Uses. The DRI contains mixed uses that will result in trip reduction through the internal capture of trips and use of alternative modes of transportation (see 3-102.C for more details);

(3) Area of Influence. Generally, the DRI is likely to have a majority of its vehicle trips within the 6-mile area of influence (see two specific standards below);

For this criterion, GRTA's rules specify in part that, for the land uses within the proposed DRI, when considered in the context of existing approved uses in the proposed DRI's area of influence, it is likely that:

- At least sixty-five percent (65%) of the single occupant automobile trips generated by the proposed DRI are reasonably anticipated to have a trip length of six (6) miles or less (Rule Subsection 3-102.D.2); or
- At least fifty percent (50%) of the work-related single occupant vehicle trips generated by the proposed DRI are reasonably anticipated to have a trip length of six (6) miles or less (Rule Section 3-102.D.3).

(4) Alternative Modes of Transportation. The DRI is expected to be well served by alternative modes of transportation other than the single-occupant vehicle.

If, as a part of the application package, a DRI applicant can show the proposed project can meet any of the four criteria, then GRTA can grant approval to expedite the review process. The expedited review guidebook focuses attention on Criterion 3-102.D, "Area of Influence," but this introduction summarizes the other three criteria.

The following criteria can be analyzed by using data from trip generation studies of the proposed DRI.

- Expedited Review Criterion for Mixed Uses (Rule Subsection 3-102.C).
- Expedited Review Criterion for Alternative Modes of Transportation (Rule Subsection 3-102.E).

Expedited Review Criterion for Mixed Uses (Rule Subsection 3-102.C)

This criterion can be analyzed by applying trip generation study data for the proposed DRI, rather than data for the AOI. Because this criterion does not involve an AOI, it is not fully within the scope of this guidebook. However, it is sufficiently related that it is included, and to omit discussion of this criterion would leave the guidebook's contents lacking in terms of a holistic picture of how to comply with the DRI expedited review criteria.

Rule Subsection 3-102.C identifies three characteristics of the physical design of the proposed DRI and the relationship of two or more land uses:

- Complementary
- Interconnected
- Interdependent

Definitions:

Complementary. A land use within the proposed DRI is considered complementary if it interrelates with one or more other land uses in the proposed DRI. That is, a complementary land use is one that serves as a destination for one or more other land uses in the proposed DRI. This means that it is logical or it can be reasonably shown that, due to the type and/or characteristics of the proposed land uses in the proposed DRI, trips originating from (generated by) one land use in the proposed DRI will be terminated at another land use in the proposed DRI. For instance, a residential land use in the DRI can be considered “complementary” with office land uses in the proposed DRI if it can be shown that certain residents of the proposed DRI may work in the office complex within the proposed DRI. As another example, office and commercial uses can be considered “complementary” if it can be shown that certain office workers will fulfill their shopping or dining (lunch) trips within the boundaries of the proposed DRI. In short, “complementary” means that “internal capture” of trips within the proposed DRI is theoretically possible.

Interconnected. A land use is interconnected with one or more other land uses within the proposed DRI if there are direct accommodations for both vehicles and pedestrians to travel between or among those land uses. Direct accommodations for vehicles means that there is one or more road or driveway connection between the uses so that a vehicle can exit one section and enter the other section without exiting the boundary of the proposed DRI. Direct accommodations for pedestrians means that there are one or more sidewalks or other approved paths so that a pedestrian can go from one section to another without exiting the boundary of the proposed DRI. GRTA staff will also consider the interconnectedness of land uses and developments in terms of bicycle travel. In analyzing interconnections, GRTA staff will also consider whether the interconnections are reasonably direct and/or provide the shortest possible route. If an interconnection is provided, but it requires the motorist, pedestrian, or bicyclist to circumnavigate in a less-than-ideal fashion, or it is provided in a way that discourages travel between the two land uses or sections, GRTA staff may not accept such

provision as “interconnected” even though accommodations for travel between the land uses are provided.

Interdependent. This term suggests that one land use is dependent upon another land use. The literal interpretation of this term would mean that one land use within the proposed DRI could not exist without the other land use. Since any use can be established virtually anywhere, subject only to market conditions and local land use regulations, this criterion for determining the appropriate mix of land uses within a proposed DRI does not seem to have essential relevance. One might interpret “interdependent” to mean that a given land use in the proposed DRI draws some of its clientele from another land use, and that the market feasibility of that particular land use would be placed in doubt if the other land use did not exist. However, preoccupying time with these types of considerations does not appear to be productive.

Use of Alternative Modes of Transportation Other than Single Occupant Vehicles (Rule Subsection 3-102.E). This term means any type of trip that does not involve use of a vehicle with only one occupant (see Figure 1).

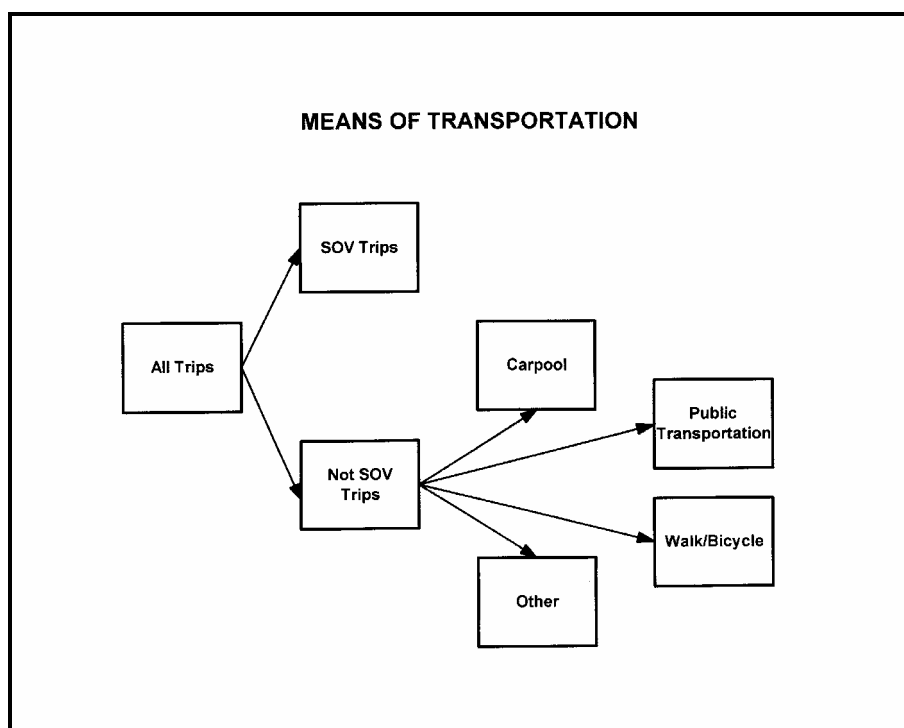


Figure 1. Means of Transportation

Internal Capture. When one or more uses are included in the same development, the traffic added to adjacent streets may be less than the sum of the individual trip-generation volumes. The reduction would be attributable to trips being made internal to the development (Stover and Koepke 1988, 39-40) (i.e., “internal capture”).

Figure 2 provides a diagram of the expedited review criterion for mixed uses (Rule Subsection 3-102.C).

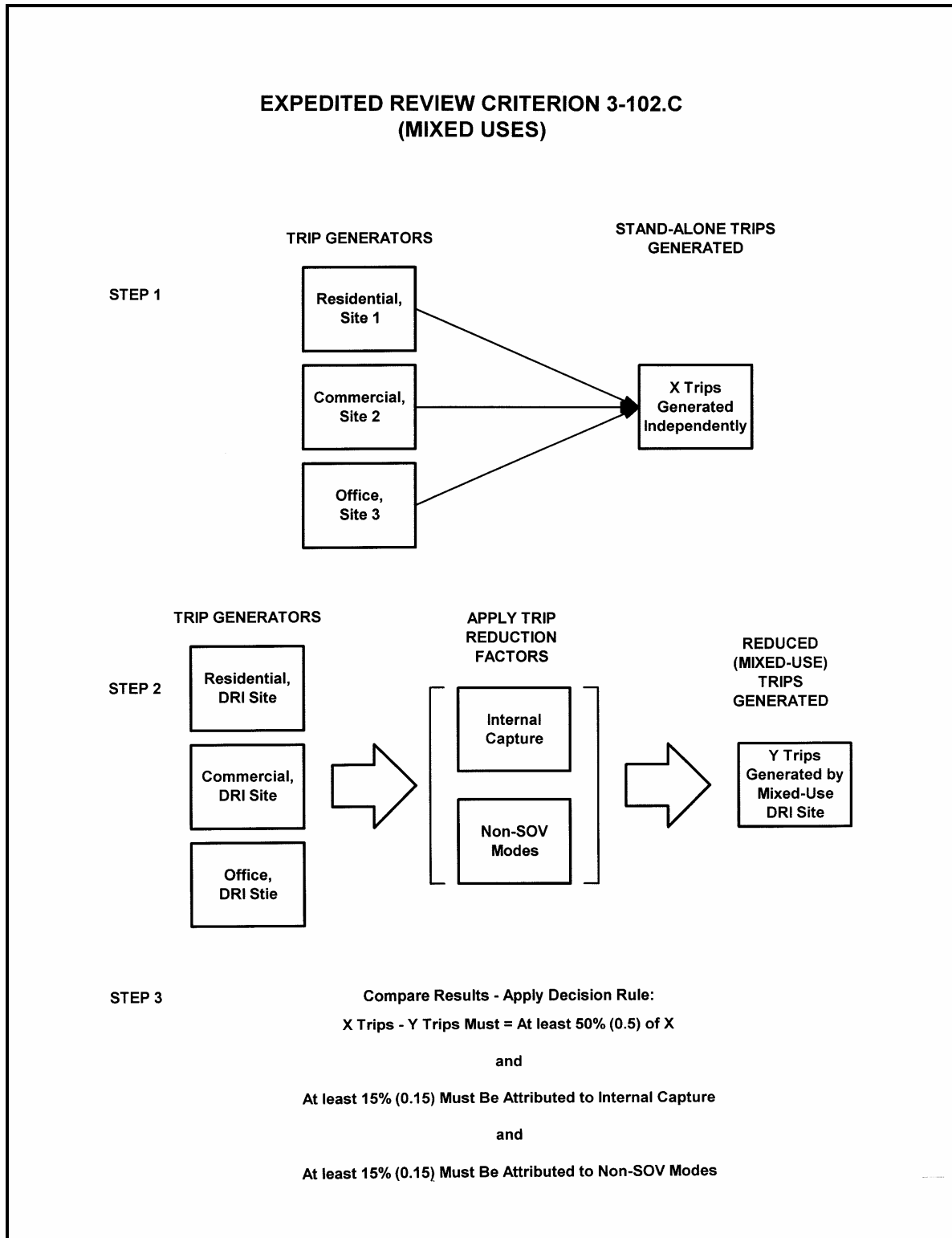


Figure 2. Expedited Review Criterion 3-102.C (Mixed Uses)

Expedited Criterion for Alternative Modes of Transportation (Rule Subsection 3-102.E)

There are four ways that a DRI applicant can satisfy expedited review with criteria that relate to alternative modes of transportation. The methods for satisfying these criteria are generally known to traffic engineers and do not relate to AOI analyses. Therefore, the methods for complying with these criteria are not fully explained in this guidebook. However, it is noted here that one of the criteria, 3-102.E.2, involves a numerical benchmark that requires at least twenty-five percent (25%) of the trips generated by the proposed DRI to be by way of modes of transportation other than the single occupant vehicle.

NON-EXPEDITED REVIEW (RULE SECTION 3-103)

Unless a DRI applicant seeks and receives approval for expedited review, the non-expedited review process applies. Section 3-103 of GRTA's rules establishes eight criteria that are applied in determining whether to approve or deny a request for non-expedited review. It is the intent that each (all) of those eight criteria be satisfied by a proposed DRI. As specified in other sections of GRTA's rules, GRTA evaluates proposed DRIs to determine the extent to which they satisfy the criteria. If they are satisfied, GRTA will approve the DRI Plan of Development (see Section 3-103.B).

The non-expedited review guidebook focuses on one of those eight standards of review: Rule Subsection 3-103.A.7. There are three criteria specified in GRTA Rule subsection 3-103.A.7:

- Does the DRI contain a mix of uses which are reasonably anticipated to contribute to a balancing of land uses such that it would be affordable for at least ten percent (10%) of the persons who are reasonably anticipated to be employed in the proposed DRI are reasonably anticipated to have an opportunity to reside within the DRI (Rule Subsection 3-103.A.7.a); or
- The DRI is located in an Area of Influence where the proposed DRI is reasonably anticipated to contribute to a balancing of land uses within the Area of Influence such that twenty-five percent (25%) of the persons who are reasonably anticipated to be

employed in the proposed DRI have the opportunity to live within the Area of Influence (Rule Subsection 3-103.A.7.b); or

- The DRI is located in an Area of Influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons who are reasonably anticipated to live in the proposed DRI and are reasonably expected to be employed have an opportunity to find employment appropriate to the persons' qualifications and experience within the Area of Influence (Rule Subsection 3-103.A.7.c).

WHICH APPLIES TO MY APPLICATION? EXPEDITED OR NON-EXPEDITED?

Most DRI applicants will not have the data and analyses completed that will make their submissions eligible for expedited review. In most cases, a DRI applicant will provide analyses that are described in the “non-expedited review” guidebook. For more information on whether a particular DRI application can qualify for expedited review, see the expedited review guidebook.