

Advertising on Triangle Transit: A Revenue Forecast & Policy Analysis

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EXECUTIVE SUMMARY

POLICY ISSUE (PG 1)

Triangle Transit is interested in how much revenue could be generated by the placement of interior and exterior advertisements on the buses and para-transit vehicles that it manages and operates. It would also like to know the impacts of advertisements on Triangle Transit's brand. In order to answer this question, several major concerns must be addressed:

1. What impacts will an advertisement program have on the agency's brand?
2. What is the most cost-effective way to manage advertisement sales: in-house or under contract?
3. What advertising policy should be issued to avoid future legal challenges to advertisements placed on buses?
4. How much revenue could be generated by allowing interior and exterior advertisements to be placed on Triangle Transit and DATA buses?
5. How much more revenue could be generated if the five transit agencies in the Research Triangle advertise together versus Triangle Transit alone?

The answers to these questions will inform the policy positions that Triangle Transit could adopt if the agency pursues on-bus advertising. This report reviews the existing literature and presents original research, including interviews with transit and advertising officials, revenue forecasts, and policy recommendations. A complete review of the research methodology for this report can be found in Appendix C.

REVENUE SIMULATION SCENARIOS (PG 44)

Four revenue scenarios are considered in chapter 8 and provide high and low estimates of average annual revenues from advertisement sales. The scenarios include 1) Triangle Transit alone, 2) DATA alone, 3) Triangle Transit and DATA together, and 4) the Triangle Region. The results of the four scenarios are presented below. These scenarios were constructed using the included Microsoft Excel file found under the Attachments tab.

TABLE ES1: REVENUE FORECAST RESULTS BY SCENARIO AND MANAGEMENT OPTION

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
In-House	\$55,953 –	\$23,060 –	\$117,753 –	\$394,872 –
Sales	\$129,859	\$77,397	\$231,462	\$792,275
Contract	\$94,102 –	\$67,787 –	\$161,889 –	\$610,678 –
Sales	\$153,226	\$111,257	\$264,483	\$977,511

Based on the results of the revenue forecast models, Triangle Transit should pursue contracted advertisement sales versus an in-house program. Triangle Transit should also pursue individual advertisement contracts for itself and DATA to maximize total revenues. Separate contracts are recommended due to the differences in markets served between the two carriers.

ADVERTISEMENT IMPACTS ON TRANSIT BRAND (PG 5)

Brand image has become a growing concern for transit agencies, encompassing not only the appearance, but also the reliability of the transit system. Maintaining a strong image for a transit agency helps reinforce ongoing relationships with riders and with the public.

Some research presented in Transit Cooperative Research Program (TCRP) publications finds no negative relationship between advertisements and the transit agencies that carry them. However, many transit representatives interviewed for this report believe that there can be negative impacts from carrying advertisements. Several strategies are used to mitigate these potential impacts:

- Draft and enforce a well-defined advertising policy
- Maintain or enhance the elements of brand that pertain to public perception, such as: reliability, frequent service, safety and cleanliness, service hours, and cost and savings.ⁱ
- Prohibit the sale of interior advertisements to bolster the experience of transit commuters.

The appearance of the buses and transit facilities is an important aspect of brand management as well. Many transit agencies promote their visual brand by doing the following:

- Limit the number of buses that can be fully wrapped, usually at 10% of the fleet.
- Limit the number of buses in the fleet that can carry advertisements. Raleigh and Chapel Hill limit advertisement placement to 50% of their fleets; this number is a good target for Triangle Transit.
- Create specific design standards for full bus wraps to avoid negative impacts on transit brand. These standards may limit the prominent placement of human faces or questionable and offensive images or text.
- Consider the inclusion of advertisements in any future rebranding or redesign efforts. This will ensure that color scheme and logo appearance are optimized.
- Require the placement of the agency logo on all exterior advertisements.

MANAGING ADVERTISEMENT SALES (PG 18)

The management of transit advertisement sales can either be managed in-house or contracted with a third-party agency. Transit agencies must decide which option will best fit their needs and desires.

If Triangle Transit chooses to allow advertisement sales, it should pursue an advertising contract. Advertising contractors have a comparative advantage when it comes to advertisement sales. They will manage all aspects of the advertisement process, from sales and collections, to application, maintenance, and removal of the ads. Not to mention insurance and sales staff expenses. Triangle Transit can expect to receive a minimum guaranteed annual payment with a revenue share of 50% to 60% if revenues exceed the minimum. Most advertising contracts last for three to five years.

Triangle Transit and DATA should pursue individual advertising contracts. Each agency can maximize potential revenues by focusing on the specific market it serves.

REGIONAL ADVERTISEMENT SALES (PG 26; 51)

Triangle Transit has expressed interest in a regional advertisement sales plan, which would place advertisement sales for the five local public transportation agencies under a single authority. Many local transit administrators are interested in this idea but would like to see discussions on this plan begin far in advance of its realization.

A great deal of planning and coordination would be required before a regional option would be viable. The transit agencies would need to unify their advertising policies but most local administrators are content with their current policies and are hesitant to make changes. Administrators voiced concerns about revenue sharing, authority over a sales force or a contractor, indemnification, and Title VI issues. Plus, if regional sales were managed in-house, management, staffing, and funding for the office would need to be arranged.

Though a regional plan is not feasible at this time, Triangle Transit should create a working group among the transit agencies to identify the challenges, costs, and benefits associated with regional sales. This group could issue a request for information to transit advertisers to understand the issues identified by contractors.

In order to facilitate regional advertisement sales in the future, Triangle Transit should consider the inclusion and placement of advertisements in efforts to create a regional brand for buses and transit property.

ADVERTISING POLICY (PG 29)

If Triangle Transit chooses to allow advertising on its buses and property, it will need to implement an advertising policy. Triangle Transit should ensure that its advertising policy includes a Statement of Purpose, a list of restrictions and prohibited content, and a clear review and appeal process for advertisements.

The Statement of Purpose should convey the following information:

- Triangle Transit property and vehicles are a nonpublic forum open to commercial speech, government speech, and nonprofits engaged in truly commercial activities.

- Nonprofits offering noncommercial services to the public can advertise so long as their advertisements do not contain prohibited content.
- Political candidate advertising that does not state any candidate positions or party affiliation is acceptable so long as it does not contain any prohibited content.

The advertising policy needs to establish a clear body of guidelines in keeping with the definition of commercial speech. These guidelines should address:

- Illegal, indecent, libelous, and obscene materials
- Ads that ridicule individuals or groups
- Advocacy or opposition to any religion, denomination, gender, race, sexuality, ideology, or nationality
- Violence and crime
- Adult, sexual, or pornographic materials.

Finally, the review and appeal process should clearly state who approves advertisements, who audits approvals, and what staff or supervisors will review advertisements that violate the restrictions. A board of officials should be defined to consider all appeals. This section should also grant the agency the power to approve, reject, or remove nonconforming advertisements at the advertiser's expense.

Triangle Transit should establish a regular, periodic review of its advertising policy to consider future legal or legislative changes. The periodic review could allow for incremental changes to the policy to bring it in line with the policies of local transit agencies.

REQUESTS FOR PROPOSALS (RFP) & ADVERTISING CONTRACTS (PG 36; 42)

If Triangle Transit pursues an advertising contract, it should issue a request for proposals (RFP) or a more preliminary request for information (RFI). These documents should be in keeping with Triangle Transit and DATA's procurement procedures. This

report presents several key findings to improve the effectiveness of the RFP and subsequent advertising contract.

- Deliver the RFP (or RFI) to multiple advertising contractors to increase competition for the contract.
- Allow for multiple contracts to be signed based on one RFP. For example, a separate contract may be signed for physical advertisements and another contract for audio advertisements.
- Ensure that the advertising contracts provide a desirable payment package. This may translate into a minimum payment with additional revenues for sales in excess of a certain threshold.
- Allocate all responsibility and cost for vehicle maintenance and repair associated with advertisement installation, upkeep, and removal to the contractor.
- Set specific response times for the contractor to repair or replace damaged advertisements.
- Ensure that all Federal third-party contractor provisions are covered in the advertising contract.
- Establish a mechanism for auditing the sales and promotional activities of the contractor.

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1. INTRODUCTION AND POLICY QUESTION

Public transportation agencies across the United States are faced with budget shortfalls and financial troubles. Expanding demand for services requires capital investments that are difficult to finance while government budget cuts reduce support for public transit. Many transit agencies are searching for new sources of revenue to avoid fare increases and to maintain levels of service. Some municipalities try to supplement public transportation budgets with special sales tax revenues. A widespread and increasingly popular option is to sell advertisement space on transit vehicles.

Triangle Transit, a regional public transportation agency in North Carolina, has never sold advertisements on its fleet of vehicles. This agency has expressed an interest in establishing a program of advertisement sales to create a revenue stream that could supplement its budget. Triangle Transit is interested in how much revenue could be generated by the placement of interior and exterior advertisements on the buses and para-transit vehicles that it manages and operates.

In order to answer this question, several major concerns must be addressed:

1. What impacts will an advertisement program have on the agency's brand?
2. What is the most cost-effective way to manage advertisement sales: in-house or under contract?
3. What advertising policy should be issued to avoid future legal challenges to advertisements placed on buses?
4. How much revenue could be generated by allowing interior and exterior advertisements to be placed on Triangle Transit and DATA buses?
5. How much more revenue could be generated if the five transit agencies in the Research Triangle advertise together versus Triangle Transit alone?

The answers to these questions will inform the policy positions that Triangle Transit could adopt if the agency pursues on-bus advertising. This report reviews the existing literature and presents original research, including interviews with transit and advertising officials, revenue forecasts, and policy recommendations.

2. METHODOLOGY

The findings and analysis presented in this report are based on an extensive literature review which surveys the many products of TCRP, the reports and papers of prominent transportation and branding think tanks, and academic research. The identified literature provides the foundation for the qualitative and quantitative research conducted for this report. A review of the relevant literature can be found in the background section of each chapter of this report.

To build on the data gathered from the literature, interviews were held in person, over the phone, or by e-mail with transit representatives and transit advertising personnel. Interviews were based on a core set of questions, though additional lines of inquiry were pursued when appropriate. Of the 25 transit and advertising personnel approached for this study, 14 agreed to participate. Various types of documentation were gathered from 21 transit agencies, including advertising policies, contracts, requests for proposal, and rate cards. Responses and key information gathered from the interviews can be found in the Analysis & Findings sections of Chapters 5,6, and 7.

A variety of quantitative data were gathered from participants, including advertising rates, sales growth rates, and advertisement space occupancy rates. All of this data was aggregated to create a revenue simulation formula and calculator for Triangle Transit. For a complete review of the research methodology please refer to Appendix C.

The revenue scenarios presented in this report rely on the revenue simulator created for this study. These are not standard revenue forecasts; the lack of historical sales data prevented a traditional forecasting approach to this issue. These revenue simulations rely on known and constructed variables. Artificial prices for each advertisement format are derived through peer analysis. Historical data is simulated based on data gathered from interview responses and peer agency data. The results of the quantitative arm of this study can be found in chapter 8. The revenue calculator is included with this document and can be found under the attachments tab.

3. TRIANGLE TRANSIT

Triangle Transit was created in response to the Regional Public Transportation Authority Act of 1989 to provide regional bus and para-transit services in Wake, Durham, and Orange Counties. Triangle Transit serves as a regional connector between several municipal transit agencies in these counties, including: Durham Area Transit Authority (DATA), Capital Area Transit (CAT) in Raleigh, C-Tran in Cary, and Chapel Hill Transit (CHT). Several university transit systems also have connections with Triangle Transit. Table 1 below provides system information for the public transportation agencies in the Research Triangle. See Appendix A for a map of all transit networks in the Triangle Area.

TABLE 1: RESEARCH TRIANGLE TRANSIT AGENCIES

Transit Agency	Routes	Fleet		Ridership (in
		Buses	Para-Transit	
Triangle Transit	24	63	14	2.0
DATA	16	50	52	5.8
CAT	30	90	3	6.4
CHT	32	98	15	7.0
C-Tran	13	31	13	0.2
TOTAL	115	332	97	21.4

SOURCE: INTERVIEW RESPONSES WITH AGENCY REPRESENTATIVES

Triangle Transit directly serves the Raleigh-Cary Metropolitan Statistical Area (MSA) and the Durham-Chapel Hill MSA, an area with a population of nearly 1.7 million people known as the Research Triangle. This area saw a population growth rate of 40% between 2000 and 2009.ⁱⁱ Durham and Orange County voters approved a half-cent transportation sales tax in recent years, and Triangle Transit approved this sales tax in December 2012. Funding raised from the sales tax will be used to purchase more buses and begin construction on a light rail line between Durham and Chapel Hill.

Triangle Transit offers six express routes, 14 fixed routes, and four employee shuttle-routes with a fleet of 60 buses and 68 vans from its main transfer center in Research Triangle Park. At present, Triangle Transit manages the fixed route and para-transit services for DATA. DATA provides 16 fixed-routes and para-transit services throughout Durham County with a fleet of 50 buses and 52 para-transit vans. The

contract between Triangle Transit and DATA will renew or expire October 1st, 2013. DATA currently contracts with Media Transit Inc. to manage the sale of interior advertisements on their buses and exterior advertisements on their para-transit vehicles, earning between \$3,500 and \$9,000 a month in advertisement revenues under this contract.ⁱⁱⁱ

Other local public transportation agencies in the Triangle sell advertisements on their fleets. Raleigh maintains an advertisement sales program that does not actively pursue advertisers with estimated annual revenues of under \$100,000.^{iv} In contrast, Chapel Hill actively sells ad space with estimated first year sales revenues of \$250,000.^v This figure will likely be reduced after the recent controversy regarding certain advertisements on Chapel Hill buses.

Triangle Transit, DATA, and CHT will benefit in the coming years from the new public transportation sales tax revenues. This funding will be used to grow transit agency fleets and improve transit networks in the Triangle. However, rapid population growth in the Triangle will likely place greater demand on transportation infrastructure, requiring new and additional sources of funding.

4. AN INTRODUCTION TO TRANSIT ADVERTISING

4.1 BACKGROUND

Transit advertising is considered a form of out-of-home (OOH) media. Transportation Cooperative Research Program (TCRP) Synthesis 32 defines OOH media as, “literally whatever carries advertising messages to the consumer outside of the home – not print and television ads.” In 2009, the research firm Arbitron reported that virtually the entire adult population of the United States is exposed to outdoor advertising each week.^{vi} Furthermore, it shows that “96% of American adults are exposed to outdoor media through local vehicle travel each week.”

OOH advertisement sales are growing at consistent rates in the United States. Media Daily News reports that, “revenues grew 4.4% to over \$1.5 billion in the third quarter” of 2012: with McDonald's, Verizon, and Chase as the largest advertisers.^{vii} The continued growth in OOH advertisement spending benefited from the continued expansion of digital OOH advertising, with forecasted domestic growth of 12.4% in 2012.^{viii} The research firm Magna Global projects an international average growth rate for OOH advertising of 7.9% annually through 2016, with international digital OOH growing at a rate of 15.2% annually through 2016. Though these high growth rates are expected to be driven by Asian markets, Magna Global finds that strong domestic transit advertising growth can be expected through 2016.

TCRP Web-Only Document 57 finds that the “[s]ale of advertising in public transit facilities and vehicles is a nearly \$1 billion industry generating approximately \$500 million annually to transit authorities.” Nonetheless, transit advertising only makes up less than 0.5% of U.S. advertising spending (17% of OOH spending).^{ix} Despite the small market share, “[m]arket conditions suggest that transit advertising is well positioned to grow.”^x This sentiment is echoed by Magna Global.^{xi}

The American Public Transportation Association (APTA) has created an advertisement revenue task force to increase transit's share of advertising revenue

dollars.^{xii} TCRP Report 133 found several issues prohibiting transit advertisement growth.^{xiii}

1. Transit advertising is not well differentiated from billboards.
2. Aside from sales activities, there is no promotion of the product to its target audiences.
3. The overall level of satisfaction with transit media sales representatives is low.
4. Transit agencies *not* in top 20 media markets face greater obstacles to growth than those in the top 20.
5. The level of product innovation is insufficient to generate interest and enthusiasm among media planners and advertisers.

Only some of these issues can be directly addressed by sales representatives. For example, many transit advertisement agencies are adopting digital and new media advertisements to reach consumers in new and exciting ways, including the use of digital displays, video screens, downloads, and interactive advertisements.^{xiv} These efforts help to differentiate transit advertising from billboards while providing new innovations for advertisers. However, sales representatives must be proactive in adopting and promoting new advertisement technologies for transit.^{xv}

Transit advertisers in North Carolina and the Research Triangle can benefit from North Carolina's Outdoor Advertising Control Act, which prohibits billboard advertising along primary and secondary roads. Additional statutes in Wake, Durham, and Orange Counties further prohibit roadside advertising.^{xvi,xvii,xviii} Taken together, these regulations have reduced the amount of outdoor advertising opportunities for advertisers. Transit is in an optimal position to fill this void and generate above average advertising revenues.

4.2 BUS ADVERTISING FORMATS

A variety of standardized advertisement layouts are used in bus advertising. These formats range from the full bus wrap to the interior car card. The following table

presents the most common advertisement layouts as defined by the Outdoor Advertising Association of America, Inc. More in-depth information on these formats can be found in TCRP Synthesis 32. See Appendix B for an illustration of the various advertisement layouts.

TABLE 2: BUS ADVERTISEMENT FORMATS

Advertisement	Dimensions	Vehicle Location
Full Wrap	Varies	Whole vehicle
Full Side	490.5 in X 116 in	One side of vehicle
King Kong	104 in X 240 in	Driver's side of vehicle
Kong (Super King)	30 in X 240 in	Driver's side of vehicle
King	30 in X 144 in	Either side of vehicle
Queen	30 in X 108 in	Curb side of vehicle
Tail Light	21 in X 72 in	Bus rear
Super Tail	35 in X 84 in	Bus rear
Full Back	94 in X 108 in	Bus rear
Headlight	21 in X 44 in	Bus front
Car Card	11 in X 28 in	Interior

SOURCE: TCRP SYNTHESIS 32, OAAA STANDARD BUS MEDIA

Variations on these formats are widespread and can meet the specific needs of the bus or agency. Transit and advertising agencies may offer non-standard advertisement options to take advantage of free space or to accommodate unique vehicle layouts. Nonetheless, very few transit agencies carry every advertisement format.

FULL WRAP

The full bus wrap is a vinyl surface application that covers the entire bus with an advertisement. This is the largest and most expensive advertisement layout. Most transit agencies limit the number of vinyl wrapped buses.^{xx} The full wrap is a popular and eye-catching option with the potential to reach the greatest number of people.^{xx} In TCRP Synthesis 51, advertisement rates in small to medium sized markets for full wraps were found to be between five and ten times the rates for king sized posters.^{xxi}

BUS SIDE ADVERTISEMENTS

These advertisements include the Full Side, King Kong, Kong, King, and Queen. These options are much cheaper than a full wrap and very visible, with the king display being the most common of all bus advertisements.^{xxii} Full Side and King Kong formats are much less common than the Kong, King, and Queen. Additionally, due to their dimensions and window overlap, the Full Side and King Kong layouts are only available as vinyl applications. The Kong, King, and Queen can be mounted in frames or applied as vinyl. In TCRP Synthesis 51, advertisement rates in small to medium sized markets for king sized posters were found to fall between \$100 and \$450. Half Sides were found to sell for approximately half the price of Kings.^{xxiii}

BUS END ADVERTISEMENTS

Tail section layouts are the most common of the bus end advertisements. These include the Tail Light, Super Tail, and Fullback layouts. These advertisements come at a premium due to their high visibility to motorists on the road.^{xxiv} However, some hybrid buses cannot carry these advertisements because of vents at the rear of the bus.

The headlight advertisement is rarely offered, due to the fact that many buses now carry bike racks on the front of their vehicles. The use of these racks obscures the advertisement, making it an unattractive option. Some transit systems place advertisements on a flat panel attached to the bike rack visible in the upright position.^{xxv}

INTERIOR BUS ADVERTISEMENTS

These advertisements, known as 'car cards', are placed overhead inside buses and are viewed by bus commuters. Interior advertisement is often used by advertisers who want to target the specific audience or demographic riding the bus.^{xxvi} However, some transit agencies limit or deny interior advertisement as a courtesy to their riders. TCRP Synthesis 32 finds that, given the "longer 'viewing time' available to riders, more copy is generally found on car cards than on other" advertisements.^{xxvii}

OTHER TRANSIT ADVERTISEMENTS

As mentioned before, non-standard advertisements can be placed on transit vehicles to generate further revenue. One increasingly popular option is to place advertisements on para-transit vehicles.^{xxviii} Advertisements can also be placed on fare cards, tickets, transfers, schedules, and maps, though fewer than 20% of domestic transit agencies sell ad space on these products.^{xxix}

DIGITAL ADVERTISEMENT FORMATS

Digital advertising is a nascent field in bus advertising. Many advertising agencies are experimenting with new digital advertising techniques to reach target audiences and to maximize revenue. Digital advertising is most widely used by large transit advertising agencies, which have begun offering cross-platform OOH advertisements. Time Magazine reports that “[s]igns can send a digital coupon to our cell phones,” and “[c]onsumers can now download music, play video games, watch movie trailers or custom design a pair of sneakers and purchase them--all by interacting with outdoor ads.”^{xxx} These interactions are applicable to bus advertisements as well.

Smaller, regional firms are also adopting digital advertising technologies for transit advertising. Transit Advertising, Inc., an East Coast transit advertising firm, has started placing LED digital exterior displays on buses in Richmond, Virginia.^{xxxi} Houck Advertising, a transit advertising firm in the Midwest, places ads on the forward digital screen of buses.^{xxxii} These ads alternate with the bus number and route information normally displayed on these screens. Another firm, Commuter Advertising, sells audio advertisements inside buses. Their technology takes advantage of the bus’s intercom system and interior digital screen to play recorded advertisements targeted to specific geographical locations. For example, an advertisement may play when the bus is approaching a restaurant. Transit systems routinely offer websites, digital apps, and phone services that can serve as advertisement platforms as well.^{xxxiii} As the use of smartphones and other digital technology expands, advertisers will continue to identify new methods of reaching their target audience.^{xxxiv}

NON-BUS TRANSIT ADVERTISING

Other methods of generating ad revenue are used by transit agencies, including advertisements within stations, transfer centers, and park-and-ride lots. Agencies that own property have also installed roadside billboards to generate revenues.^{xxxv}

One common practice that does not generate revenue but improves transit infrastructure is to allow an advertiser to adopt a bus stop. In this practice, an advertiser will install a bus shelter in return for exclusive advertisement rights for a given period of time.^{xxxvi} Ownership of the stop reverts to the transit agency once the contract expires. Advertisements can also be sold and placed at existing bus stop structures. However, the placement of advertisements at bus stops is prohibited by several state and local laws, including: the North Carolina's Outdoor Advertising Control Act, Wake County Code of Ordinances Section 10-2084.1; Durham County Unified Development Ordinance Article 11; and Orange County Code of Ordinances, Appendix A, Chapter 6.12.12.B.

4.3 OPPOSITION TO TRANSIT ADVERTISING

Despite the financial benefits that transit advertising can provide, there are many sources of opposition to the placement of advertisements on buses. This opposition can come from the public or political spheres. TCRP Synthesis 51 presents the example of Houston Metro. Houston is one of the top ten advertising markets in the United States and is the only top-ten market that does not allow advertisements. The reasons for this are complex, but ultimately Houston seeks to brand its buses with only the Metro name to ensure the vehicles are clean and visually noticeable.^{xxxvii} As Houston Press reporter Richard Connelly suggests, the founders of Houston Metro find advertising "tacky."^{xxxviii}

Concerns about vehicle maintenance can inspire opposition to bus advertisements. TCRP Synthesis 32 finds that "Another maintenance issue is related to the use of paint and direct application ads and the need to touch up or repaint vehicles that have been painted or covered with adhesive material." However, "Most contracts

now call for the advertising contractor to bear the costs of such maintenance for painted or whole-wrapped buses.”^{xxxix}

For transit agencies that are displaying advertisements in exterior-mounted frames, maintenance costs can become a problem. TCRP Synthesis 32 lists several problems with advertisement frames:

- Costs associated with buying, storing, and maintaining frames
- They can come loose if not properly maintained
- They can damage property if parts of the frame extend beyond the bus
- Frames can come loose or be damaged by bus washers

These problems can be avoided with the use of direct-application vinyl advertisements though this format has its own problems.

Finally, opposition to the appearance or content of ads has been a major concern for transit agencies. Chapel Hill, North Carolina has recently had a high-profile case displaying this tension. The city of Chapel Hill failed to properly implement its transit advertising policy, inadvertently allowing an advertisement that generated public opposition. This opposition did not stop with the specific ad, but was also applied to all advertising on Chapel Hill Transit buses. Though Chapel Hill Transit temporarily suspended its advertising operations, the debate over its advertising policy has not ended.^{xl}

5. The Impact of Advertising on Transit Brand

5.1 KEY FINDINGS & RECOMMENDATIONS

Study participants noted that transit brand is more than a color scheme and logo; it embodies all aspects of citizens and commuters interaction with the transit agency. Nonetheless, administrators worry about the potential associations between a transit agency and the advertisements it carries. Several strategies are used to mitigate these associations:

- Draft and enforce a well-defined advertising policy
- Maintain or enhance the elements of brand that pertain to public perception, such as: reliability, frequent service, safety and cleanliness, service hours, and cost and savings.^{xii}
- Prohibit the sale of interior advertisements to bolster the experience of transit commuters.

The appearance of the buses and transit facilities is an important aspect of brand management as well. The color scheme and logo of a transit agency should continue to be identifiable regardless of advertisement placement. Many transit agencies promote their visual brand by doing the following:

- Limit the number of buses that can be fully wrapped, usually at 10% of the fleet.
- Limit the number of buses in the fleet that can carry advertisements. Raleigh and Chapel Hill limit advertisement placement to 50% of their fleets; this number is a good target for Triangle Transit.
- Create specific design standards for full bus wraps to avoid negative impacts on transit brand. These standards may limit the prominent placement of human faces or questionable and offensive images or text.
- Consider the inclusion of advertisements in any future rebranding or redesign efforts. This will ensure that color scheme and logo appearance are optimized.

- Require the placement of the agency logo on all exterior advertisements.

5.2 BACKGROUND

Brand image has become a growing concern for transit agencies and is directly investment. A better public image attracts riders, leading to higher revenue and greater demand for transit service. In turn, higher revenue and greater demand increase the likelihood of service expansion and improvements, making public transport even more attractive to riders.^{xlii} In addition to marketing, a brand encompasses not only the appearance, but also the reliability of the transit system. Both Triangle Transit and DATA have gone through re-branding campaigns in recent years for the very reasons cited above. Maintaining a strong image for a transit agency helps reinforce ongoing relationships with riders and with the public.

The effects of advertising on a transit brand have not been publicly studied. Nonetheless, a great deal of research has looked at transit branding, often for bus rapid transit (BRT). Cain and Flynn, writing for the Federal Transit Administration (FTA), find that commuters' perceptions of a transit agency are based on five key elements: reliability, frequent service, safety and cleanliness, service hours, and cost and savings.^{xliii} Another study conducted for the American Public Transportation Association (APTA) found that among American commuters with access to public transit, reliability and convenience were the greatest attributes contributing to perceptions of transit.^{xliiv} There is no obvious connection between advertising and brand in any of these elements. Writing in the *Journal of Product and Brand Management*, Tony Meenaghan finds that advertising plays a role in brand, but he does not find that advertising for one product affects the brand of another product.^{xliv} However, the absence of research does not mean that advertisements on buses will not have positive or negative impacts on a transit system.

One great example of managing a transit system's visual brand while accommodating advertisements can be found in TCRP Synthesis 32. Seattle/King County Metro planned to improve its image over a ten year period while replacing most of its buses. After a broad and involved design and review process, Seattle adopted

new interior and exterior designs that emphasized the agency's brand without conflicting with the standard locations of advertisements on buses. This example demonstrates that branding and advertising can coexist without being detrimental to one another.

TCRP Report 133 generally reinforces this conclusion. This report includes interviews and results from a large mail-based survey of domestic transit agencies. The researchers found no connection between the success or viability of transit advertising and brand of a transit agency. However, advertiser respondents did not view transit advertising as clean (over 90%). This could translate to a negative perception of public transit in general, despite the fact that over 50% of respondents found transit advertising to be effective and reliable. Nonetheless, strong brand management will continue to communicate that a transit system is clean, safe, and reliable.^{xlvi}

Some research has found that certain types of advertising could improve the brand of a transit agency. TRCP Report 63 presents one such finding that has prompted action within several transit agencies. The report states that transit agencies can improve their image within the community by partnering with civic and private organizations, as well as with the private sector. Specifically, when partner organizations sponsor major events, the transit brand can develop an association with those organizations or movements, thus improving its image. This strategy requires long-term advertising relationships with an organization to develop the association. Presumably, this would differ from the short-term nature of commercial advertising.

5.3 ANALYSIS & FINDINGS

Interview respondents largely echoed the available literature on brand and brand management. Participants offered new insights, given the lack of research on the effect of advertising on transit brand. All respondents voiced the importance of transit brand and viewed their brand as more than just a color scheme or logo. One respondent said:

“[Our] brand is the cumulative experience the customers have from using our service, from the look of the vehicles to the reliability of the fleet, the

on-time performance, friendliness and route knowledge of the operators, to how we spend the tax payers funds.”

Another respondent stated that:

“There’s a fair amount of pride among board and staff and leadership and the organization about the quality of the look of the vehicles and the experience of both vehicle drivers and riders.”

Many transit agencies have invested heavily in their branding in order to send a message to customers that the bus is clean, safe, and reliable. As one manager said:

“We have clearly established our brand and continue to advertise and promote the brand and logos. If we were a new agency or had just completed a re-branding of logos then [brand value] would be an issue for a few years.”

Transit managers know that a clean and modern look is an important aspect of branding. Triangle Transit has established and maintained its current brand for several years, as has DATA. Sustaining a positive impression of the visible brand is especially important when displaying advertisements. Many agencies limit the number of vehicles carrying advertisements to ensure the visibility of their brand. As mentioned earlier, Raleigh and Chapel Hill only place advertisements on 50% of their fleets.

Several respondents commented on the impacts of advertisements on the transit brand. Their concerns centered on issues of vehicle appearance and customer relations. One respondent mused on the relationship between policy, appearance, and customers:

“That’s your brand, and even if you have a policy where you feel good about it, whatever you’re displaying on the side of your bus or inside your bus, no matter the disclaimer, no matter anything else, it’s going to be associated with you.”

Another responder noted a particular advertiser on their fleet. A national homebuilding corporation named Beazer had purchased a large number of full bus wraps.

“The only bad thing about the Beazer experience was that you actually lose branding or you pick up branding accidentally because people begin to associate [ads on] those buses with your service.”

One respondent whose agency was terminating its advertising contract and program had a very extreme perspective on vehicle appearance.

“I think you’re prostituting your brand when you do the exterior advertising . . . Your bus is your brand. I just don’t think advertising being placed all over it makes that much sense.”

The above respondent did not have a good experience with the advertising contractor or with the advertising policy created by her city. Her experience is not normal, though. The feelings of the other respondents were that advertisements and transit brand can successfully be managed. One agency manager noted the connection between appearance and customer relations:

“You need to think about what are the impacts on your brand and what are the impacts on your customers, and are your customers gonna be comfortable riding in a vehicle where they’re surrounded by advertisements for this, that or the other thing?”

Customer experience is a critical part of brand maintenance. The people who pay to ride the bus may not wish to look at interior ads. Some transit agencies try to accommodate their clients by not selling interior advertisement space on fare routes. Respondents whose agencies did not sell interior advertisements believed that the ad-free interior positively impacted the appearance of the bus, and thus the brand.

One specific issue was raised by several respondents regarding appearance and customer relations: that of the fully wrapped bus. A transit manager complained that a large number of bus wraps resulted in commuters thinking that a new bus company had entered the market and was more reliable. Another official shares a story about full wraps:

“We had this one pretty notorious plaintiff-attorney’s face wrapped on a good bit of—maybe every wrap you’d see would be his. People just got sick of seeing it . . . The ads were so damn ugly that people didn’t wanna look at them.”

Despite these experiences, most respondents felt that full wraps could be sold with minimal impacts on transit brand. The creation of advertisement guidelines that apply specifically to full wraps was one solution offered to this problem. Another idea for protecting the brand was to establish a review and appeals process for all advertisements.

Designing or modifying the vehicle logo and color scheme to accommodate advertisements is one solution to preserve the brand while earning revenue. One prime example from the literature is that of Seattle/King County Metro, which redesigned the appearance of its vehicles to carry advertisements without covering up branding. One respondent mentioned this when talking about rebranding:

“We would want to incorporate the continuation of advertising as a way to generate revenue.”

Ultimately, all participants viewed brand as an important consideration in managing a transit agency, but they placed an equal or greater value on system performance. Transit brands can be easily recognized by their color schemes as well as their logos, therefore ensuring that the customer can still identify the bus, and rely on it to be on time and safe, are the key elements of maintaining brand.

6. MANAGING TRANSIT ADVERTISEMENT SALES

6.1 KEY FINDINGS & RECOMMENDATIONS

The management of transit advertisement sales can either be managed in-house or contracted with a third-party agency. Transit agencies must decide which option will best fit their needs and desires.

If Triangle Transit chooses to allow advertisement sales, it should pursue an advertising contract; most transit agencies contract advertisement sales. Advertising contractors have a comparative advantage when it comes to advertisement sales. They will manage all aspects of the advertisement process, from sales and collections, to application, maintenance, and removal of the ads. Not to mention insurance and sales staff expenses.

Triangle Transit can expect to receive a minimum guaranteed annual payment with a revenue share of 50% to 60% if revenues exceed the minimum. A contract length of three years will give Triangle Transit and DATA a stable revenue source while providing a review period to determine if advertisement sales are truly good for the transit agency and brand.

Triangle Transit and DATA should pursue individual advertising contracts. Each agency serves a different market and thus can maximize potential revenues by allowing the contractor to focus on the individual markets.

In-house advertisement sales management offers transit administrators greater flexibility in managing and regulating advertisement sales. However, this option comes with the expenses of employee wages, benefits, and commissions. In-house programs must also cover the costs of facilities for sales employees, insurance for the program, vehicle maintenance costs, and other unexpected expenses. If the transit agency fails to generate annual sales growth, then the net annual revenues will shrink as annual employee costs grow.

Many in-house programs place the responsibility for application, maintenance, and removal of the advertisements on the advertiser. This is a disincentive to prospective clients. Large transit agencies generally have greater financial benefit to pursue in-house operations. But few transit agencies have a comparative advantage in advertisement sales.

Triangle Transit has expressed interest in a regional advertisement sales plan, which would place advertisement sales for the five local public transportation agencies under a single authority. Many local transit administrators are interested in this idea but would like to see discussions on this plan begin far in advance of its realization.

A great deal of planning and coordination would be required before a regional option would be viable. The transit agencies would need to unify their advertising policies. Many administrators are happy with their current policies and are hesitant to make changes. Administrators voiced concerns about revenue sharing, authority over a sales force or a contractor, indemnification, and Title VI issues. Plus, if regional sales were managed in-house, management, staffing, and funding for the office would need to be worked out.

Though a regional plan is not feasible at this time, Triangle Transit should create a working group among the transit agencies to identify the challenges, costs, and benefits associated with regional sales. This group could issue a request for information to transit advertisers to understand the issues identified by contractors.

6.2 BACKGROUND

INTRODUCTION

Transit agencies can employ two different strategies for advertisement sales: either an in-house program or a third-party contract. Both of these models have a great deal of variation, and some public transit agencies utilize a hybrid of the two.^{xlvii} Several TCRP publications provide comprehensive descriptions of both advertisement sales models and case studies from agencies that use them.

IN-HOUSE ADVERTISEMENT SALES MANAGEMENT

TCRP Synthesis 32 indicates that a minority of transit agencies selling advertisement space on their fleets manage sales in-house. Generally, the responsibility for handling advertisement sales is assigned to a marketing department of one to three personnel. In some agencies, personnel receive a flat salary, while others are paid a commission. Very few large transit agencies maintain a separate advertising department to handle ad sales.

Several reasons are often cited for pursuing an in-house sales strategy. First and foremost, transit agencies maintain greater control over a program that can greatly impact the image of their system. The agency has the ability to control the people managing ad sales. It also has a greater ability to trade and barter advertisement space with local firms and agencies. A greater level of oversight is also provided by an in-house program. Finally, a larger share of advertisement revenues can be realized through this strategy, though the effectiveness of the sales force will dictate how true this is.^{xlviii}

Another reason to pursue in-house sales management is that advertising contractors may fail to meet their contractual obligations and therefore terminate their contracts. Possible reasons for this may include a weaker than expected market or poor contractor performance. Transit agencies that are considering contracting with a third-party firm must consider the financial stability of the firm and its track record of fulfilling its obligations.^{xlix}

In-house programs come with costs that must be considered. Basic expenses such as salaries and facilities for personnel can quickly eliminate the gains from sales revenue. Commission and incentive packages for advertisement personnel can also reduce the net revenues the transit agency earns. Finally, vehicle maintenance and advertiser relations can also drive up costs for the transit agency.^l

Transit administrators often pursue in-house programs and decide against contracting sales simply because the anticipated sales and cost savings are not significantly different than those faced by an in-house program.^{li} Another factor

identified in literature on the topic is the difficulty and high cost that transit agencies face in auditing contractors.^{lii} Finally, transit administrators cite several key reasons for opposing contracts TCRP Research Results Digest 46, including: “the loss of operational control, shortcomings in service quality, and problems with customer service.”^{liii}

CONTRACTED ADVERTISEMENT SALES MANAGEMENT

Most transit agencies that sell advertisements contract with an outside agency.^{liv} In one survey of general managers, the most prominent reasons given for contracting were to start new services, reduce operating costs, and improve service-cost efficiency.^{lv} Regarding contracts for advertisement sales, the primary reason for contracting is to raise new revenues.^{lvi}

Though transit advertising comprises approximately 17% of the OOH advertising market, a diverse array of local, regional, and national firms provide transit advertising services. Some of the largest agencies are CBS Outdoor, Titan 360, Lamar Outdoor, and Blueline Media. These agencies tend to focus on the largest media markets in the country. Smaller firms such as Houck Advertising, Media Transit, Inc, and Commuter Advertising hold contracts for small to medium-size markets.

Many reasons for contracting advertisement services are present in the literature. TCRP Synthesis 51 indicates that advertisement contracts generally provide a minimum revenue guarantee, lending greater stability to a transit agency budget. In addition to the minimum guarantee, small to medium transit agencies usually receive a net revenue share of between 10% - 70%, with 50% - 60% being typical. However, “the revenue share was less than the guarantee in 2002 for two-thirds of the agencies providing revenue data.”^{lvii} Though more current data is not available, these agencies still benefited from the minimum revenue guarantee.

Transit advertising suffers from low market share due to its inability to perform at all points of the advertising process.^{lviii} Advertising contractors are more likely to address this issue through their adoption of new advertising technologies and

approaches.^{lix} Contractors are in a better position to utilize new and innovative advertisement strategies in order to increase their profits.^{lx}

Advertising contracts are usually for increments of three to five years, further lending stability to revenue forecasts.^{lxi} Advertising contractors have established relationships with national advertisers, attracting greater advertisement revenues to a transit market. More importantly, transit agencies can avoid the costs associated with advertisement sales because the contractor provides those services, including any necessary insurance.^{lxii}

Advertising contracts are generally very detailed, ensuring that both parties know their responsibilities. For example, TCRP Research Results Digest 46 notes that “[m]ost transit service contracts not only define the kinds of services to be offered, but also prescribe how those services are to be provided; how service quantity and quality are to be measured and monitored; and who will provide the vehicles, facilities, maintenance, and support services.”^{lxiii} Furthermore, these contracts include provisions instructing the contractor “to control costs and pay attention to service quality.”^{lxiv} These levels of detail help to ensure that a transit agency receives the service it expects while protecting its brand image.

6.3 ANALYSIS & FINDINGS

IN-HOUSE ADVERTISEMENT SALES

Interview respondents shared experiences similar to those reported in the literature. Only two agencies participating in this survey managed advertisement sales in-house. In both cases, respondents stated that they had not had good experiences with contractors in the past while working for other agencies. Another reason for conducting advertising sales in-house was that the transit agencies did not find a significant difference between the amounts of revenue a contractor could deliver and the amount they could raise themselves.

Respondents indicated that there were few monetary costs associated with in-house advertisement sales. The primary cost they recognized was the salary, benefits, and commissions of employees tasked with advertisement sales. However, these respondents have overlooked additional expenses that are not immediately quantifiable. First, the transit agency's legal department must dedicate time and resources to any challenges to an advertisement. This is something that Chapel Hill recently faced. Second, somebody within the agency must manage billing and collections for advertisement sales.

Another issue is the problem of installing, maintaining, and removing advertisements. Many agencies that manage sales in-house place the impetus on the advertiser to find other businesses to print the advertisement, install it, maintain it, and remove it from the bus. One advertising sales executive discussed the problems this creates:

“We've had customers buying Durham that wanted to buy Raleigh. I'll call [Raleigh] and say, 'Look, this is what we have,' and they just put up so many roadblocks, we just say, 'Forget it.' They shouldn't make it that difficult. They wanted us to arrange to have all the installs done, which—I don't have any contacts at Raleigh. We end up just not sending the business. It's easier.”

Advertisers prefer to deal with a single party that will sell the advertisement space, and handle the installation and removal of the ad.

Another cost that is overlooked by in-house programs is the cost and responsibility of maintaining the advertisements. If the transit agency places the responsibility on the advertiser to install the ad, then the advertiser will likely use a separate company for that task. However, the firm that installed the advertisement is not necessarily responsible for maintaining the advertisement. Peeling or damaged advertisements can negatively impact the appearance of the bus and thus impact the transit brand.

The two interview participants who managed advertisement sales in-house both required advertisers to coordinate installation and removal of the advertisements. However, these two agencies handle the actual sale of advertisements in different ways. The following case studies will explore this difference.

CHAPEL HILL TRANSIT^{lxv}

Chapel Hill Transit maintains an active sales program. This means that they have one employee directly tasked with selling advertisements. This employee receives a commission that can reach over 5% of annual sales. This salesperson reaches out to local and national firms while managing any advertisers who contact Chapel Hill Transit. Based on an active approach, Chapel Hill Transit forecasts gross advertisement revenues in its first complete fiscal year of advertising totaling \$250,000. They also expect to have gross revenues approaching \$500,000 in several years.

RALEIGH CAPITAL AREA TRANSIT (CAT)^{lxvi}

CAT does not maintain an active sales program. They have no personnel tasked with pursuing advertisement sales. CAT has a single person in the marketing department who has the added responsibility of receiving advertisement orders. This employee is estimated to commit 20% of her time to handling advertising. As a result of this passive approach, CAT estimates that their annual gross advertisement sales revenues are in the range of \$75,000 per year. CAT is forecasting future gross revenues of up to \$125,000 based on a new revenue model they are using.

Chapel Hill Transit and CAT are similar in size and annual ridership – though CAT serves a market four times larger than Chapel Hill Transit – however; Chapel Hill is projecting much larger revenues than CAT. These forecast differences may be explained by the different approaches to advertisement sales. Perhaps both of their revenues could be higher if they provided more services to advertisers in the form of arranging advertisement installation and removal.

CONTRACTING ADVERTISEMENT SALES

Many transit agencies rely on advertising contractors to manage advertisement sales. The literature suggests that this is the model adopted by a majority of transit agencies. Several interview participants provided direct answers regarding the benefits of contracting advertisement sales. The primary reason offered is that transit agencies specialize in moving people, not selling advertisements; relying on an advertisement agency allows the transit agency to focus on what it does best. One respondent put it this way:

“Basically, our goal for [transit agencies] is just to make their life simple. Again, it’s not necessarily their job to find advertising. It’s their job to run a transit system.”

Participant transit agencies had limited marketing departments, in most cases relying on a single person to handle marketing and advertising. One advertising respondent noted this imbalance:

“I think what happens mostly with ad sales with transit authorities is they rely on the phone call to come in, whereas my company actually pursues advertisers. Usually at a transit authority there may be one or two . . . people at the most selling this inventory, where we have a sales team, an inside sales team.”

Another respondent seized on this same idea when he said:

“Triangle Transit may have marketing directors and all that, but that job does not necessarily mean to sell advertising, that’s to generally promote ridership on the transit system. I got six people here that all they do is . . . spend all day, eight hours a day, digging up new leads for our transit systems. After that, it’s following up, and tracking down the contracts and proposals.”

These respondents made compelling cases for the comparative advantage that advertising agencies hold in advertisement sales. One respondent acknowledged that

transit agencies can excel at selling advertisements. However, the respondent pointed out that such programs can be costly:

“Some agencies do a really good job with the in-house, but they have to hire people to do the sales, to do the installs, and manage the program. If you look at the overall cost, after you hire somebody, and you're paying them health insurance and benefits and all that, and you're paying your own installers—are you really coming out that much ahead versus having an outside contractor do it that basically does everything?”

The up-front and hidden costs of maintaining effective in-house advertisement sales can seriously erode the revenues that a transit agency brings in. However, advertisement contractors can cause problems for a transit agency. For example, transit agencies may come to rely on the monthly revenue check that an advertising contractor delivers. However, fiscal problems may arise should the contractor fail to transfer the funds. Several participants pointed out that they have little ability to audit an advertising contractor. Also, even with a contractor, the transit agency is still responsible for any content placed on its buses. In the event of a legal challenge to an individual advertisement or the advertising program, the transit agency will bear the majority of the burden.

One major advantage of contracting advertisement sales is the fact that the transit agency does not need to make an initial investment in the program. This fact will become important should the advertising program not meet expectations. The transit agency can discontinue advertisement sales without needing to lay off any employees or accept losses for unnecessary equipment or supplies. These sunk costs cannot be avoided when the advertising program is managed in-house.

REGIONAL VERSUS INDEPENDENT ADVERTISEMENT SALES

One option under consideration by local transit planners is the management of advertisement sales on a regional, unified level. This proposal would include the five public transportation agencies in the Research Triangle, but would exclude the university transportation systems of Duke and NCSU. The motivation for this idea is the

prospect that a unified Triangle market will warrant higher advertisement rates and sales than the transit agencies can earn independently.

Several respondents from advertising agencies and local transit systems commented on this prospect. The advertising representatives all agreed that a unified system could potentially bring in higher revenues, though they could not predict by how much. Transit respondents were willing to discuss the idea, but regarded it somewhat skeptically. For example, David Eatman of Raleigh's Capital Area Transit said:

"The attraction of a regional market is interesting and it would be something that we would very much want to discuss. The strong policy and approval process that we have created over years is something that we would be very hesitant to let go of. We feel very comfortable within our marketing program and our ability to accept or reject opportunities. As long as that was not deteriorated in any way . . . we are certainly open to talk about it."

He went on to add:

"In regards to a regional advertising effort I would start that or discuss that very early with all stakeholders."

Mr. Eatman's sentiments are similar to those of Brian Litchfield of Chapel Hill Transit. Mr. Litchfield weighed in on the idea of regional advertisement sales as well:

"We'd be interested in hearing a proposal and if it could be demonstrated that there was greater revenue in that for us than there was individually, then it would be something we'd have to seriously consider, but I would say that it's hard to say whether we'd be interested in it or not at this point without knowing more of the details and the actual dollar amounts of it."

In order to develop a plan for regional management of advertisement sales, a number of issues must be addressed. First, a unified advertisement policy would need to be established. This would require extensive negotiation considering the differences

between the advertising policies of DATA, CAT, and Chapel Hill Transit. Triangle Transit is in a position to draft an advertising policy that stands as an example of a unified regional policy. Triangle Transit can also seek to influence DATA's advertising policy to move it towards a regional ideal.

Other issues that will need to be immediately addressed include a decision on how advertisements are placed on the individual systems. One solution may be to allow advertisers to place advertisements on each transit system or to place an advertisement on all systems at once. Another issue to address will be a revenue sharing agreement.

If plans for a regional branding effort move forward, then Title VI concerns may need to be addressed under a regional advertisement program. If all buses between the five systems carry the same branding, then it may conceivably be illegal under Title VI to place advertisement on only one system. This possibility requires further review.

Should all of these issues be resolved, there is still no guarantee that revenue increases or cost reductions will make a regional plan worthwhile. A revenue forecast for the regional option is presented in Chapter Seven of this paper.

7. ADVERTISING POLICY & REQUESTS FOR PROPOSALS

7.1 KEY FINDINGS & RECOMMENDATIONS

If Triangle Transit chooses to allow advertising on its buses and property, it will need an advertising policy. The advertising policy is the primary source of guidance on what can be advertised. The policy also creates the legal foundation for acceptance or rejection of proposed advertisements. Triangle Transit should ensure that its advertising policy includes a Statement of Purpose, a list of restrictions and prohibited content, and a clear review and appeal process for advertisements.

The Statement of Purpose should indicate what kind of legal forum Triangle Transit is creating by carrying advertisements. The Statement of Purpose should also define commercial speech and outline what types of speech are acceptable. Triangle Transit and DATA can maximize revenue by limiting restrictions on certain types of advertisements. The Statement of Purpose should convey the following information:

- Triangle Transit property and vehicles are a nonpublic forum open to commercial speech, government speech, and nonprofits engaged in truly commercial activities.
- Nonprofits offering noncommercial services to the public can advertise so long as their advertisements do not contain prohibited content.
- Political candidate advertising that does not state any candidate positions or party affiliation is acceptable so long as it does not contain any prohibited content.

The advertising policy needs to establish a clear body of guidelines in keeping with the definition of commercial speech. The guidelines should support the statement of purpose and should be easily applied in the review and appeal processes. These guidelines should address:

- Illegal, indecent, libelous, and obscene materials

- Ads that ridicule individuals or groups
- Advocacy or opposition to any religion, denomination, gender, race, sexuality, ideology, or nationality
- Violence and crime
- Adult, sexual, or pornographic materials.

Finally, the review and appeal process should clearly state who approves advertisements, who audits approvals, and what staff or supervisors will review advertisements that violate the restrictions. A board of officials should be defined to consider all appeals. Ensure that this process does not allow for partisan or biased decision-making. This section should also grant the agency the power to approve, reject, or remove nonconforming advertisements at the advertiser's expense.

Triangle Transit should establish a regular, periodic review of its advertising policy to consider future legal or legislative changes. The periodic review could also allow for incremental changes to the policy to bring it in line with the policies of local transit agencies.

Requests for Proposals (RFP) & Advertising Contracts

If Triangle Transit pursues an advertising contract, it should issue a request for proposals (RFP) or a more preliminary request for information (RFI). These documents should be in keeping with Triangle Transit and DATA's procurement procedures. This report presents several key findings to improve the effectiveness of the RFP and subsequent advertising contract.

- Deliver the RFP (or RFI) to multiple advertising contractors to increase competition for the contract. Numerous regional advertisers are interested in expanding into the Triangle market.
- Allow for multiple contracts to be signed based on one RFP. For example, a separate contract may be signed for physical advertisements and another contract for audio advertisements.

- Ensure that the advertising contracts provide a desirable payment package. This may translate into a minimum payment with additional revenues for sales in excess of a certain threshold.
- Allocate all responsibility and cost for vehicle maintenance and repair associated with advertisement installation, upkeep, and removal to the contractor.
- Set specific response times for the contractor to repair or replace damaged advertisements.
- Verify that all Federal third-party contractor provisions are covered in the advertising contract.
- Establish a mechanism for auditing the sales and promotional activities of the contractor.

A RFP and advertising contract, based on these considerations and the other recommendations in this report, should provide the best outcome for advertisement sales at Triangle Transit and DATA.

7.2 BACKGROUND

INTRODUCTION

Many transit agencies implement advertising policies to govern advertisements on their systems. The specific elements of an advertising policy are dictated by the intent of the agency and by decades of court decisions. An analysis of historical legal cases is beyond the scope of this paper, however, for a good legal overview, refer to TCRP Legal Research Digest 33: Developing and Implementing a Transit Advertising Policy. A more cursory review can be found in TCRP Legal Research Digest 29: First Amendment Implications for Transit Facilities: Speech, Advertising, and Loitering.

In addition to national rulings, advertising policies must account for state and municipal laws. North Carolina state law affects transit advertising in two immediate ways. First, the Regional Public Transportation Authority Act grants agencies like

Triangle Transit the authority to contract with other parties and to generate revenue through the leasing of property.^{lxvii} Second, the North Carolina Outdoor Advertising Control Act restricts outdoor advertising in ways that can affect transit advertising. County and municipal laws also restrict outdoor advertising in ways that may affect transit advertising.

In addition to considering all of these laws, a transit agency must determine what role it wants to fill by allowing advertisements on its buses. The following sections review the specifics of forum designation and commercial speech.

PUBLIC FORUMS

First amendment implications in advertising policies focus on three designations that have been created through various legal rulings.^{lxviii} These include: traditional public forums, designated public forums, and nonpublic forums. Transit advertising policies exclude traditional public forums, which generally apply to streets and fixed structures. The designated public forum allows for expressive activity as well as commercial advertisement. Thus, with this designation, religious, political, and controversial statements can be displayed and are rarely rejected by the transit agency. This position is generally adopted by agencies that want to benefit the public and generate discussion in addition to generating revenue.^{lxix} A minority of transit agencies maintain an advertising policy that supports a designated public forum.

The majority of transit agencies adopt a nonpublic forum policy. A nonpublic forum limits advertising content to commercial or marketing advertisements. In fact, TCRP Legal Research Digest 33 points out that “[t]he more a government restricts access to its facilities, the less likely a court is to find a public forum.” This finding is well defended by a variety of legal cases that defend an agency's right to reject or accept non-commercial advertisements.^{lxx}

In order to secure a specific designation, other transit agencies have done several things. First, they explicitly state a forum designation intent.^{lxxi,lxxii} This explicit statement is part of the advertising policy. Agencies also reveal their intent through past and current policies.^{lxxiii} Second, clear guidelines and restrictions are established

regarding advertising. These guidelines should reveal that either making money or offering a public service is the main goal.^{lxxiv} Third, and most importantly, the advertising policy must be consistently enforced.^{lxxv} In the event of a legal challenge, consistent enforcement of a well-defined advertising policy will bolster an agency's intent and secure the transit agency's legal position. Finally, all restrictions and rejections must be viewpoint neutral. A nonpublic forum designation does not permit an agency to reject advertisements based on a partisan viewpoint.^{lxxvi}

COMMERCIAL SPEECH

Commercial speech arose from a variety of circuit court and Supreme Court decisions regarding commerce in the twentieth century. The Legal Information Institute at Cornell University states that the Supreme Court has defined commercial speech as “speech where the speaker is more likely to be engaged in commerce, where the intended audience is commercial or actual or potential consumers, and where the content of the message is commercial in character.”^{lxxvii} Commercial speech differs from political speech in the amount of First Amendment protection it receives. For example, “the First Amendment protects commercial speech that is not false or misleading and that does not advertise illegal or harmful activity. Commercial speech may be restricted only to further a substantial government interest and only if the restriction actually furthers that interest.”^{lxxviii}

Regardless of the forum designation that a transit agency adopts, many agencies seek to define what content can be advertised on their systems. In the instance of commercial speech, common guidelines are adopted by most transit agencies. TCRP Synthesis 32 offers a good list of prohibited content:^{lxxix}

- Illegal, indecent, or immoral ads
- Political, alcohol, or tobacco ads
- Libelous, obscene, or profane ads
- Ads that ridicule individuals or groups of people

- Advocacy of or opposition to a religion, denomination, tenet, or belief
- Violent, criminal, or anti-social behavior
- False, misleading, or deceptive ads
- Adult materials and services
- Explicit sexual material
- Pornography or businesses that traffic in pornography
- Advertising that appears as graffiti, gang signs, or symbols

In addition to these restrictions, many agencies reserve the right to deny ads, to approve controversial ads, and to remove objectionable ads at the advertiser's expense.^{lxxx} Some agencies continue to accept political ads, with the caveat that each ad be marked as a "paid political advertisement."^{lxxx} Other agencies continue to allow alcohol advertising, which can generate large revenues.^{lxxxii} The restrictions listed above represent a broad swath of transit agencies and can be adopted based on the desires of individual agencies. What is important is that guidelines be precise and diligently enforced.

PUBLIC SERVICE ANNOUNCEMENTS & CO-PROMOTION

The majority of transit systems in the U.S. allot some portion of their advertising space to public service announcements (PSA) and co-promotion.^{lxxxiii} Triangle Transit's current practice is to only carry PSA messages that they themselves would promote as a transit agency.^{lxxxiv} Since Triangle Transit does not currently carry advertisements, there is little limit to the amount of space available for PSAs.

Unpaid PSAs for area nonprofits are often carried as a public service.^{lxxxv} According to TCRP Synthesis 51, "[t]ransit agencies typically reserve 10% of the total advertising space for Public Service Announcements or their own communications, although the percentage among agencies surveyed varied from none to 15%." Many transit agencies also use any unsold space for PSAs and co-promotion.

Artwork can also be placed on buses as a form of PSA. This practice has been used in many large metropolitan areas and has also been used in Raleigh, North Carolina. In Raleigh's *Art on the Move* program, Capital Area Transit and Raleigh's Art Commission worked together to place local art on bus exteriors. This program raised community awareness and built goodwill toward CAT.^{lxxxvi}

Many transit agencies use their unsold advertising space for co-promotion efforts. TCRP Syntheses 23 and 51 both provide examples of transit systems swapping advertising space with local newspaper, television, and radio stations. Another common practice is co-promotion efforts with museums, sports teams, and special events.^{lxxxvii} These co-promotions “often encourage riders to take public transportation to an event or attraction.”^{lxxxviii}

Some transit agencies place limits on co-promotions to avoid losing advertising revenues. They do this by only accepting co-promotions with advertisers who have not advertised on buses for at least 12 months or they require the advertiser to agree to maintain their previous level of advertising.^{lxxxix} Other agencies only accept co-promotion arrangements with “public, nonprofit, and civic organizations.”^{xc}

COMPONENTS OF AN ADVERTISING POLICY

TCRP Synthesis 51 provides a brief overview of the elements of an advertising policy. Three general topics are usually found in a policy: a statement of purpose, a list of restricted or prohibited advertising, and a review process for individual advertisements. A section describing PSAs and co-promotion standards may also be included.

The statement of purpose is the section where a transit agency defines whether its buses will be a designated public forum or a nonpublic forum. The agency can clearly state what role transit advertising is meant to play, whether economic or public service. Transit agencies may also rule out accepting PSAs or public advertisements in the statement of purpose.^{xc} If an agency chooses to allow PSAs, it “may take steps to ensure that the viewpoints expressed are not seen as representing the agency's views.”^{xcii}

Finally, agencies may also outline other objectives pertaining to the experience of the passenger.

The section pertaining to the restriction of advertisements must include a list of unacceptable advertisements. Topics such as sexuality, alcohol, and politics are often regulated in this section.

The section on a review process must lay out the specifics of how a transit agency accepts or rejects individual advertisements. The review process section can indicate what people will be responsible for review, what timeline they must adhere to, what additional factors may be considered, and also a process for appeal or revision.^{xciii}

Transit agencies that work with an advertising contractor often allow the contractor to conduct the initial review of individual advertisements.^{xciv} Many agencies view this practice as a way to avoid the responsibility of reviewing advertisements. However, research presented in TCRP Legal Research Digest 33 finds that transit agencies continue to bear the legal responsibility for advertisement regulation despite the use of a contractor. This is especially true in the event of free speech violations.

One additional element that should be addressed in an advertising policy is the issue of what happens if advertisements cannot be displayed due to events like labor strikes or vehicle recalls^{xcv}. These contingencies can be directly addressed in an advertising policy to protect the transit agency and to reimburse the advertisers, if necessary.

REQUESTS FOR PROPOSALS (RFPs)

Transportation agencies must know what they want to receive through a transit advertising contract. The RFP is the first opportunity to let contractors know exactly what the agency expects from a partnership. RFPs can range in size from a few pages to more than one hundred pages. If an agency is not ready to issue a RFP, then a request for information (RFI) can represent a preliminary step before the RFP. What is important is that an agency clearly communicates its needs, limits, and desires through this document.

TCRP Legal Research Digest 38 defines a RFP as a document “seeking technical qualifications and price proposals from interested firms.”^{xcvi} TCRP Synthesis 51 provides much more depth in describing the RFP process:

“The typical process involves releasing a RFP with a detailed scope of work and other contracting requirements, holding a pre-bid conference to answer questions from prospective proposers, and reviewing extensive written proposals. Proposals typically include a description of the company’s experience and the experience of individuals who will be assigned to the contract, demonstration of the agency’s ability to perform, information about other current and completed contracts, financial statements, references, and the financial bid.”^{xcvii}

In addition to the aspects described above, many RFPs will mention requirements for insurance, standardized forms, and length of contract term.^{xcviii} Finally, requesting information on past markets served, bankruptcies and lawsuits can provide valuable background information about a contractor.^{xcix} TCRP Synthesis 51 contains several great examples of RFPs in its appendices.

ADVERTISING CONTRACTS

The advertising contract should embody the responsibilities of the transit agency and the advertising agency. It should also account for Federal third-party contract provisions as defined by the Federal Transit Administration.^c Lists of these provisions can be found in FTA Circular 4220.1F. Additional contract clauses can be found in FTA's Best Practices Procurement Model. The numerous provisions and clauses are too extensive to list in this report.

Advertising contracts can specify that the transit agency expects a revenue guarantee and revenue sharing arrangement with the contractor. The transit agency can also design or agree a system of performance incentives to increase advertising revenue. The transit agency should include specific language about who will own any equipment used for the advertising program. Advertising contracts can include

information about auditing procedures and the renegotiation of contract terms or penalties for violating the contract.

The final contents of an advertising contract will depend on the contents of the winning bid, any negotiated agreements between the contractor and the transit agency, and local, state, and national guidelines detailing contract contents. Qualified legal representatives are necessary to parse this information and to draft a binding final contract. Such actions are beyond the scope of this report.

7.3 ANALYSIS & FINDINGS

ADVERTISING POLICY

According to TCRP Legal Research Digest 33, transit agencies are equally split between adopting designated public forum and nonpublic forum designations. However, only one of the study respondents for this report indicated that their agencies maintained a designated public forum policy, with the rest maintaining a nonpublic forum. Consequently, these local and national agencies maintained a nonpublic forum policy that emphasized commercial speech.

The agencies differed on what speech they were willing to include in the commercial speech designation. One North Carolina respondent indicated that his agency:

“Had a defined policy that only allowed ads for government speech and commercial activity.”

The government speech clause is important. This clause allows government entities to place PSAs or service notices regardless of whether a commercial transaction is involved. Another respondent complained that her city’s advertising policy was too restrictive:

“As I said, the city has a pretty restrictive advertising policy. It only allows

for the advertisement of commercially available products or services. A lot of nonprofits can't advertise . . . the state DOT wanted to do ads for 'click it or lose it'; some seatbelt thing. That was not a commercially available product or service so they couldn't do it."

Many nonprofits provide free services to consumers. Denying nonprofits and government agencies an outdoor venue to advertise their services can eliminate a large share of potential revenue. This is especially true in North Carolina where there are relatively few options for outdoor advertising.

Adhering to the Legal Information Institute's definition of commercial speech will allow an advertising policy to accept government and nonprofit advertisements. Applying specific restrictions will allow a transit agency to specify what nonprofit messages will be accepted. As one respondent advised:

"Clearly delineate between profit and nonprofit so as to prevent any decision that indicated refusal based on content."

These kinds of guidelines and restrictions can be generally stated in an advertising policy's statement of purpose and fully defined in the lists of restricted and prohibited contents.

Some transit agencies allow the placement of regulated political advertisements on their buses. One advertising contractor offered this advice on political advertising:

"If they do political advertising, [we recommend] that it's for candidates for office only, not for issues, and if they do allow them, it has to have . . . minimum four-inch letters on the ad; 'paid political advertisement, not endorsed by blah-blah-blah.'"

The respondent also noted that political advertisements provide large revenue bumps, though political advertising can be tricky if an advertising policy does not provide clear limits and guidelines for candidate advertisements. Policies can indicate that only a candidate name without party affiliation can be visible. They can also state

that no issues or position statements are visible. One transit manager lamented that his agency missed out on large revenues because its advertising policy restricted candidate advertising. Transit agencies can gain a great deal of revenue by investing the extra effort to draft a well thought out provision for political advertising. Nonetheless, allowing candidate advertising may be difficult to manage.

Another controversial advertising topic is alcohol advertising. Several transit agencies allow alcohol advertising, with one citing split public support for the measure. Though alcohol advertising is unpopular, it can generate significant revenues. Every advertising contractor who participated in this study indicated that alcohol advertising can represent a large portion of an agency's advertisement revenues. However, several of these respondents advised their clients to not pursue alcohol advertising in order to avoid public opposition.

Each participating transit agency has adopted a commercial speech platform for their advertising policy. As revealed above, commercial speech can be flexible and requires further definition. Triangle Transit has suggested that they would prefer to implement a policy that promotes commercial speech and excludes political and policy speech while banning alcohol and sexually related content. The background on advertising policy in this report will help focus efforts to adequately regulate these topics.

The list of regulated topics from TCRP S32 (presented earlier in this chapter) can be used as a foundation for Triangle Transit's advertising restrictions. Triangle Transit can modify these restrictions to meet its needs and to allow government and candidate advertising. Allowing nonprofits to advertise services – and not ideologies or policy positions – can also be permitted without violating a commercial speech policy foundation.

Triangle Transit can include an additional layer of protection in its advertising policy by reserving the right to deny ads, approve controversial ads, and to remove objectionable advertisements. Restrictions must be clearly stated and consistently applied in the advertising policy. Chapel Hill has experienced serious problems due to

inconsistencies within its policy, though they maintain a designated public forum. Before implementing advertisement sales, Triangle Transit should finalize an advertising policy.

Finally, the advertising policy will need a clear procedure for approving and rejecting advertisements, as well as a system for appeals. One participant described how his agency planned on enhancing its review system:

“The other thing that I’d be clear on is your review and appeals process. We’re also talking about adding a third review to this, whereas in between the initial review and the appeal to the transit director, we’d set up kind of a staff committee that would consist of a couple of staff folks from around the town.”

Establishing a review process and assigning review responsibilities will bolster efforts to defend the forum designation of an advertising policy. Triangle Transit will want to test its review and appeal process to ensure that it will function correctly in the event of a challenge. The actions of the review and appeal board must be non-partisan while strictly adhering to the advertising policy.

Additional concerns that frequently are addressed in advertising policies include rate schedules for advertisements and discounts for bulk purchases or long term contracts. Analysis of rate cards for DATA, CAT, and Chapel Hill Transit show that these agencies offer discounted rates for long term contracts. This is normal practice within the transit advertising industry. None of these agencies offer bulk purchase discounts. In fact, very few agencies reduce prices for bulk purchases. More information about long term contract discounts can be found in Appendix C.

PUBLIC SERVICE ANNOUNCEMENTS

The policy positions of participants regarding PSAs were varied. One respondent indicated that PSAs were allowed as paid advertisements. All other participants indicated that they did not charge for the placement of PSAs. One agency described their policy toward PSAs as follows:

“We do non-profit advertising for 501C3s. They can do interior advertising

on cab buses. Their ads have to be approved by our Raleigh Transit Authority. They can place interior placards for up to 45 days. They can do up to two per bus.”

Another participant indicated that the agency’s policy was to allow any unsold interior space to be allotted to PSAs. The other participants did not have a specific policy for PSAs. The literature indicates that PSAs are placed for free in bus interiors.^{ci} The potential exists to raise more revenue by allowing exterior space to be sold for PSAs. Should this option be pursued, it must be clearly outlined in the advertising policy.

SELF-PROMOTION

Policies toward self-promotion and co-promotion are similar to those used with PSAs. TCRP S51 finds that, on average, transit agencies commit 10% of space to these efforts. Participants for this study generally had no written policy regarding self-promotion and co-promotion, indicating that they generally used available space. One participant said, “We prefer revenue over free ads.”

No written policy is necessary for self-promotion and co-promotion. However, establishing a clear policy may allow Triangle Transit to better market its services through joint promotional efforts. Adopting a strategy of allotting 10% of available space to self- and co-promotion will allow the agency to better plan and manage its resources.

REQUESTS FOR PROPOSALS & CONTRACTS

A request for proposals will be issued if Triangle Transit decides to contract advertisement sales for itself or DATA. Few participants had much to say about the contracting process. This may simply be the result of transit managers not being directly responsible for issuing requests for proposals or for drafting contracts.

One advertising participant recommended that a RFP clearly state that more than one contract may be awarded. In this case, the participant worked for a company that provided audio advertising onboard buses. They were the only company doing this and thus had contracts with several agencies providing audio advertising only. The respondent indicated that an RFP should at least indicate that the transit agency is open to additional or alternative proposals to generate additional revenues.

The RFP should state that all bidders essentially provide references. This is to say that an agency responding to the request for proposal needs to show that it has met its financial obligations to previous and current clients, as well as showing that it has not violated its contracts. Explanations need to be provided in the event that an advertising agency violated a contract or failed to share revenues on time. The transit agency should seek to avoid considering bids from contractors that have poor histories.

The specific legal aspects of the advertising contract deserve a greater level of analysis than can be provided in this report. Nonetheless, a transit agency should ensure that the contract provides a minimum annual payment from the contractor. This minimum may increase annually, whether indexed to inflation or to a predefined growth rate. Transit agencies should also receive additional revenues if sales exceed a certain threshold, often the amount of the minimum payment. Participants in this study indicated that they received or distributed additional payments ranging from 30% to 70% of revenues. The revenue sharing agreement should be clearly defined in the contract.

The length of the contract can vary from a low of 2 years to a high of 15 years.^{cii} The most common time period for an advertising contract is 3 to 5 years. A shorter contract may be preferable when establishing an advertising program to allow a transit agency to switch contractors if the first contract term does not meet expectations.

Finally, Triangle Transit should ensure that the advertising contract includes a mechanism for auditing the actions of the advertising contractor. These provisions should account for the limited resources that Triangle Transit can dedicate to such audits. The contract can place the financial burden for the audit on the contractor, though this is not a standard practice.

8. REVENUE FORECASTS & REVENUE SCENARIOS

8.1 FINDINGS & RECOMMENDATIONS

Four revenue forecast scenarios are considered in this chapter. These scenarios provide high and low estimates of average annual revenues from advertisement sales. The scenarios include 1) Triangle Transit alone, 2) DATA alone, 3) Triangle Transit and DATA together, and 4) the Triangle Region. These forecasts consistently find that contracted management of advertisement sales returns higher revenues than in house management. The results of the four scenarios are presented here in Table 3.

TABLE 3: REVENUE FORECAST RESULTS BY SCENARIO AND MANAGEMENT OPTION

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
In-House	\$55,953 –	\$23,060 –	\$117,753 –	\$394,872 –
Sales	\$129,859	\$77,397	\$231,462	\$792,275
Contract	\$94,102 –	\$67,787 –	\$161,889 –	\$610,678 –
Sales	\$153,226	\$111,257	\$264,483	\$977,511

Based on the results of these scenarios, Triangle Transit should consider the following recommendations if it chooses to pursue transit advertising:

- Triangle Transit should contract advertisement sales rather than pursue an in-house option.
- Triangle Transit should pursue individual advertisement contracts for itself and for DATA.
- Triangle Transit should create a working group to issue a Request for Information on the prospect of contracting for regional advertisement sales and to build a plan for the pursuit of unified advertisement sales.

8.2 BACKGROUND

Identifying the appropriate strategy for estimating the financial benefit of advertisement sales on Triangle Transit and DATA buses requires the estimation of potential revenues despite the absence of historical data. The techniques associated with revenue forecasting are best suited to this task. Simply put, revenue forecasting “involves the use of analytical techniques to project the amount of financial resources available in the future.”^{ciii} Two major elements are contained within a revenue forecast: an estimation of operating expenses and a sales forecast. Operating expenses are defined as “an expense incurred in carrying out an organization's day-to-day activities, but not directly associated with production.”^{civ} A sales forecast is defined as “projection of achievable sales revenue, based on historical sales data, analysis of market surveys and trends, and salespersons' estimates.”^{cv} The fundamentals of revenue forecasting call for identifying all the variables that fall into these two categories.^{cvi}

The literature already cited in this paper agrees on a basic process for conducting a revenue forecast. Generally, six steps are considered^{cvii, cviii, cix}:

1. Define the issues that affect the forecast and presentation.
2. Select a time period and dataset to review for the revenue forecast. Identify both expense and revenue data.
3. Examine the data to identify trends, rates of change or patterns.
4. Understand all assumptions present in the analysis.
5. Select a forecasting method and generate actual projections.
6. Evaluate the estimates for reliability and validity; conduct a sensitivity analysis.

Following this procedure allows for viable revenue forecasts to be assembled. Each step requires additional work and the authors must provide extensive reviews of how best to complete the process. These guidelines largely inform the methodology of the revenue forecast in this paper.

More advanced techniques for revenue forecasting can be applied by Triangle Transit and its associated agencies in the event that historical sales data is available. At least one year of data is necessary, though ideally several years should be gathered to form a baseline dataset.

Several other analytic strategies were considered for this research. Initially, a cost-benefit analysis appeared to be the appropriate technique. However, cost-benefit analysis is defined as the process of setting “out all the costs and benefits associated with a given project in money terms, in order to weigh up whether a project brings a net gain to society and to be able to compare multiple options for limited government resources.”^{cx} Given that the nature of this project does not call for a comparison of costs, benefits, or the gain to society, this method can be ruled out.

Another approach that can be considered is a financial analysis. In his foundational work on financial analysis, Lucien Fowler defines the practice as “the study of an individual or a company. At times it covers the conditions as of only one moment . . . Other times it involves the conditions as of several periods . . . The chief objective of financial analysis is to provide a sound basis for the establishing or the granting of credit.”^{cx} Clearly the estimation of advertisement revenues cannot be accomplished with financial analysis.

8.3 REVENUE SCENARIOS

I present here four revenue scenarios for consideration: Triangle Transit alone, DATA alone, Triangle Transit & DATA, and the Triangle Region. Each scenario considers the potential revenues earned through in-house operations and under a contract. Several assumptions are common to each revenue scenario, including:

- All transit systems allow 50% of the fleet to carry advertisements, in keeping with the policies of local peer agencies, including CAT and Chapel Hill Transit.
- No separate space is set aside for Public Service Announcements.

- No growth in advertisement sales is included to allow for a conservative estimate.
- Advertisement rates decrease by 5% for sales contracts between six to twelve months.
- Advertisement rates decrease by a cumulative 9.75% for sales contracts longer than twelve months.
- All sales simulations are for a 12-month period and are not tied to a specific fiscal year.

The low end of each forecast is based on an average advertisement space occupancy rate of 40%, while high end figures are based on an occupancy rate of 65%. Table 4 presents the average percent sold values for each advertisement type.

TABLE 4: INDIVIDUAL PERCENT SOLD RATES

Advertisement	40% Sold	65% Sold
Full Wrap	20%	50%
King Kong	40%	65%
King	55%	80%
Queen	55%	80%
Full Back	40%	60%
Super Tail	40%	65%
Tail	50%	70%
Interior Card (x10)	20%	50%

Second, in the scenario options where a contractor is used, I assume a revenue share of 60%. This percentage is based on qualitative data that indicates 60% is a common rate of revenue sharing in transit advertising contracts. Table 5 below shows the long term contract adjusted rates for Triangle Transit, DATA and the Triangle Region.

TABLE 5: LONG TERM SALES ADJUSTED ADVERTISEMENT RATES

Advertisement	Triangle Transit Rate	Durham Rate	Triangle Region Rate
Full Wrap	\$1,960.50	\$2156.60	\$2156.55
King Kong	\$784.20	\$785.70	\$784.20
King	\$292.60	\$244.00	\$341.34
Queen	\$219.50	\$206.60	\$316.96
Full Back	\$539.20	---	\$584.13
Super Tail	\$241.60	\$227.20	\$261.15
Tail	\$193.20	\$144.30	\$221.60
Interior	\$294.10	\$225.60	\$294.08

SOURCE: REVENUE CALCULATOR

Every scenario presents potential advertising revenues – in 2012 dollars – for the fifth year of advertisement sales. This allows enough time for an advertising program to mature. Several years of lower annual revenues can be expected while the program develops. These forecasts are presented without annual sales growth to account for the developmental period of the program.

Additional assumptions and considerations are explained in the methodology in Appendix C.

SCENARIO 1: TRIANGLE TRANSIT

Since Triangle Transit has never sold advertisements on their buses there is no historical data on which to base advertisement prices. I used a peer analysis to establish a rate card (Table 6) on which to base revenue forecasts (see Appendix C for the methodology).

TABLE 6: RATE CARD FOR TRIANGLE TRANSIT (ALL PRICES ARE PER MONTH)

Duration	Full Wrap	King Kong	King	Queen	Full Back	Super Tail	Tail	Interior Card*
1 month	\$2,000	\$800	\$300	\$225	\$550	\$250	\$200	\$300
3 months	\$2,000	\$800	\$300	\$225	\$550	\$250	\$200	\$300
6 months	\$1,900	\$760	\$285	\$214	\$523	\$238	\$190	\$285
12 months	\$1,805	\$722	\$271	\$203	\$496	\$226	\$181	\$271

* This price includes ten cards for placement on five buses.

SOURCE: DERIVED ADVERTISEMENT RATES FOR TRIANGLE TRANSIT

By managing advertisement sales in-house Triangle Transit could generate revenues between \$40,270 and \$104,321 in year five. These figures are based on the assumption that Triangle Transit maintains an active advertising program with at least one person dedicated solely to selling advertisement space.

Triangle Transit may also take the option of contracting advertisement sales with a transit advertising sales agency. Under this option, Triangle Transit could receive a revenue share between \$94,102 and \$153,226 in year five. These figures assume that triangle transit will receive 60% of total revenues generated, though a minimum guarantee greater than the minimum share could be negotiated. In this option, Triangle Transit does not bear any costs for the sale, installation, maintenance, or removal of advertisements.

SCENARIO 2: DATA

DATA discontinued its external advertising on buses several years ago; however, DATA continues to sell interior advertisements and exterior advertisements on para-transit vehicles. These rates are insufficient for use in a renewed bus advertising program. I used a peer analysis to establish a rate card (Table 7) on which to base revenue forecasts for DATA.

TABLE 7: RATE CARD FOR DATA (ALL PRICES ARE PER MONTH)

Duration	Full Wrap	King Kong	King	Queen	Super Tail	Tail	Interior Card*
1 month	\$2,200	\$805	\$250	\$215	\$250	\$200	\$27
3 months	\$2,200	\$805	\$250	\$215	\$250	\$200	\$27
6 months	\$2,090	\$765	\$238	\$204	\$238	\$190	\$25
12 months	\$1,986	\$727	\$226	\$194	\$226	\$184	\$24

* This price includes ten cards for placement on five buses.

SOURCE: DERIVED ADVERTISEMENT RATES FOR DATA

Based on the above rate card, the adjusted rates for long term contracts, and the revenue model presented in Appendix C, DATA could generate revenues between \$11,762 and \$58,854 in year five by selling advertisements in-house. These figures are based on the assumption that DATA maintains an active advertising program with at

least one person (based on Triangle Transit employee wages and commissions) dedicated solely to selling advertisement space.

DATA may also take the option of contracting advertisement sales with a sales agency. Under this option, DATA could receive a revenue share between \$67,787 and \$111,257 in year five. These figures assume that DATA will receive 60% of total revenues generated, though a minimum guarantee greater than the minimum share could be negotiated. DATA does not bear any costs for the sale, installation, maintenance, or removal of advertisements.

Under the 2004 contract entered into with Media Transit Inc., DATA allowed the placement of advertisements on their entire fleet. Should this policy be continued, DATA could expect to receive revenues similar to those cited above. This outcome is based on the assumption that an increase in available fleet will result in reduced relative rates of space sold. However, with 100% fleet availability and 65% of space sold – assuming no space designated for carrying public service announcements – the in-house option would generate revenues as high as \$179,383 in year five. Revenues under a contract in this situation could reach \$222,514. A space sold rate of 65% with 100% of the fleet carrying advertisements is unrealistic and would take many years to reach.

SCENARIO 3: TRIANGLE TRANSIT & DATA

Under this scenario, advertisement sales for Triangle Transit and DATA are managed jointly. This scenario is based on the rate cards presented in Tables 5 and 6, as well as the adjusted advertisement rates presented in Table 3. The revenue forecasts in this scenario are based on several assumptions: first, advertisement sales on both systems will continue to be separate. Second, in-house operations for both fleets will be handled by a single employee. Third, this forecast assumes that both Triangle Transit and DATA will only place advertisements on 50% of their fleets.

By managing advertisement sales in-house, DATA and Triangle Transit could expect to generate revenues between \$117,753 and \$231,462 in year five. These figures are based on the assumption that DATA and Triangle Transit maintain an active

advertising program with one person (based on Triangle Transit employee wages, benefits, and commissions) dedicated solely to selling advertisement space.

Under an advertising contract, Triangle Transit and DATA could receive an annual revenue share between \$161,889 and \$264,483 in year five. These figures assume that DATA will receive 60% of total revenues generated, though a minimum guarantee greater than the minimum share could be negotiated. What remains uncertain in this scenario is how the revenues will be divided between the two agencies.

SCENARIO 4: TRIANGLE REGION

This final scenario involves the consolidation of transit advertising sales for all five public transportation agencies under a single banner. Table 8 provides system information for all five agencies. By combining advertisement sales for all five agencies, higher rates for these advertisements can be demanded.

TABLE 8: SYSTEM INFORMATION FOR TRANSIT AGENCIES IN THE TRIANGLE

Transit Agency	Routes	Fleet		Ridership
		Buses	Para-Transit	(in
Triangle Transit	24	63	14	2.0
DATA	16	50	52	5.8
CAT	30	90	3	6.4
CHT	32	98	15	7.0
C-Tran	13	31	13	0.2
TOTAL	115	332	97	21.4

SOURCE: TRANSIT AGENCY WEBSITES

Since no advertisement rates exist for the Research Triangle region, I simply use the highest rates currently demanded within the Triangle Market. Raleigh’s CAT has the highest advertising rates and will thus be used as a proxy for Triangle-wide advertisement sales (Table 9). However, higher rates could possibly be demanded.

The revenue forecasts in this scenario deserve special attention. An estimate of this kind with so many unknowns is less accurate than in other scenarios. Providing a forecast for the in-house option in this scenario requires capital considerations that are hard to estimate. Consequently, a greater level of confidence can be placed on the forecast for revenue under a contract than for in-house sales.

TABLE 9: RATE CARD FOR THE TRIANGLE REGION (ALL PRICES ARE PER MONTH)

Rate Card for the Triangle Region (All prices are per month)								
Duration	Full Wrap	King Kong	King	Queen	Full Back	Super Tail	Tail	Interior Card*
1 months	\$2,200	\$800	\$350	\$325	\$605	\$300	\$200	\$300
3 months	\$2,200	\$800	\$350	\$325	\$605	\$300	\$200	\$300
6 months	\$2,090	\$760	\$333	\$309	\$575	\$285	\$190	\$285
12 months	\$1,986	\$722	\$316	\$293	\$546	\$271	\$181	\$271

* This price includes ten cards for placement on five buses.

SOURCE: RALEIGH CAPITAL AREA TRANSIT RATE CARD

By managing advertisement sales in-house, the Triangle Region could expect to generate revenues between \$394,872 and \$792,275 in year five. These figures are based on the assumption that a regional advertisement sales office will employ four dedicated employees and have approximately \$10,000 in office expenses per employee per year.

Under an advertising contract, the Triangle Region could receive an annual revenue share between \$610,678 and \$977,511 in year five. These figures assume that the unified contract will receive 60% of total revenues generated. What remains uncertain in this scenario is how the revenues will be divided between the five agencies.

SCENARIO ANALYSIS

These four scenarios above present revenue forecasts for bus advertising only. Additional revenues could be generated by permitting advertisement placement at park-and-ride lots or within stations and transfer centers. Additional revenues could be earned by contracting for audio, video, and other digital advertisements on buses. Exact figures for the additional revenue available from these advertising methods are not available at this time.

A clear trend is present in these forecasts showing that an advertising contract would be more profitable than in-house operations. Table 10 displays the results of the four scenarios. The revenue forecasts for contract sales consistently exceed the forecasts for in-house operations. Scenario 3, the combination of sales for DATA and Triangle Transit, shows the cost reductions possible for managing sales in-house.

However, the price reductions may be inconsequential after several other expenses are considered.

TABLE 10: MATRIX OF MANAGEMENT OPTIONS AND SALES SCENARIOS

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
In-House	\$55,953 –	\$23,060 –	\$117,753 –	\$394,872 –
Sales	\$129,859	\$77,397	\$231,462	\$792,275
Contract	\$94,102 –	\$67,787 –	\$161,889 –	\$610,678 –
Sales	\$153,226	\$111,257	\$264,483	\$977,511

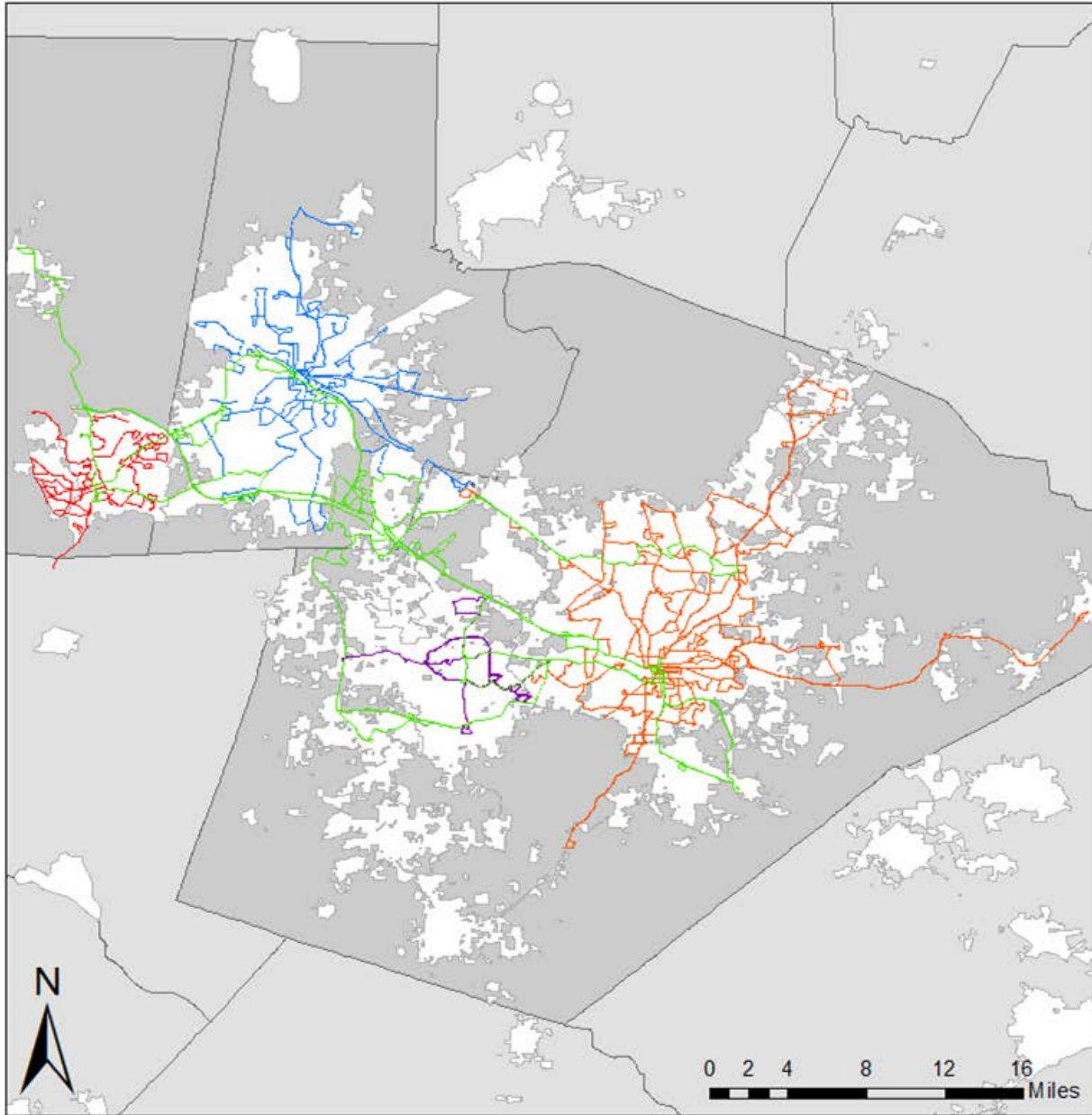
Though the revenue model for in-house programs considers the salesperson’s wage and \$10,000 of office expenses, the model does not account for several other expenses which could not be quantified. For example, any insurance costs associated with advertisement sales will be paid by the transit agency rather than a contractor. Additional personnel expenses must be considered for the person responsible for billing and collections. Any employees involved in an advertisement review will also invest time and energy in the review process, accruing a cost. These expenses should be considered and quantified if an in-house option is considered.

Scenario 4 provides revenue estimates for regional management of advertisement sales. This scenario is the most difficult to construct. One interview respondent presented with the regional option provided a contract estimate for this scenario of \$500,000 to \$750,000 per year. Another respondent provided a basic revenue forecasting model of \$150 per bus per month. Using this model, a total of approximately \$600,000 gross could be earned annually. Other respondents from advertising agencies declined to make a ballpark estimate of potential revenues. These estimates are slightly lower than those predicted by the revenue model used for this report. However, the forecasts in this report are for year five, while the estimates cited above are for year one. Nonetheless, all of these estimates provide an approximate sense of how much money could be earned under a regional system.

In order for the regional option to become a reality, a great deal of administrative work and compromise must be accomplished. Many expenses will need to be considered in any efforts to align the policies and practices of all five agencies to get to a point where a regional approach is feasible. As previously mentioned, advertising policies would need to be unified, as would procurement and contracting policies. Relationships of accountability and indemnification would need to be established between the five agencies and advertising contractors. The time and resources required to build the foundation for regional advertisement sales may be prohibitive to the overall idea at this time. Further research on a regional approach is necessary and could perhaps be accomplished through the issuance of a Request for Information (RFI) regarding a regional advertisement contract.

9. APPENDICES

APPENDIX A: RESEARCH TRIANGLE BUS ROUTES



Legend

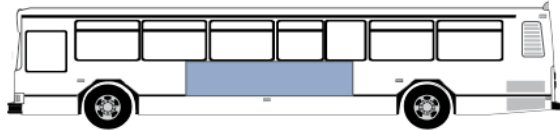
- | | | |
|-------------------|------------------------------|---------------------|
| County Boundaries | Triangle Transit | Chapel Hill Transit |
| Triangle Area | DATA | Cary C-Tran |
| City Boundaries | Raleigh Capital Area Transit | |

Map scale: 1:545,000

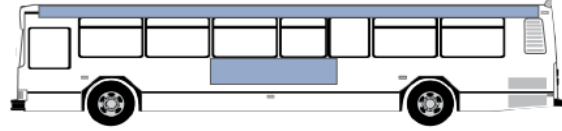
Data Accurate As of 2010

APPENDIX B: BUS ADVERTISEMENT FORMATS

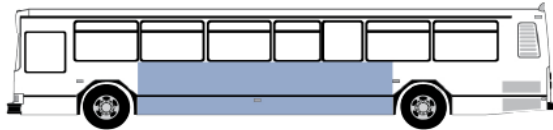
BUS SIDES



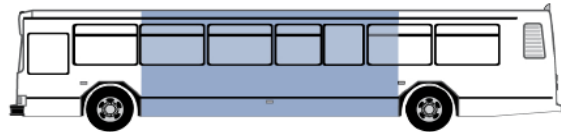
KING



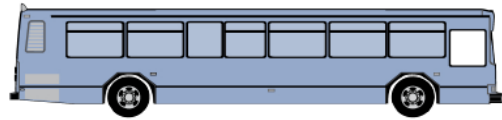
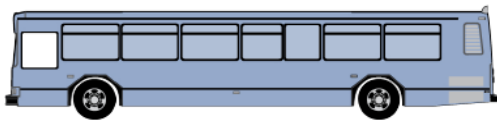
QUEEN
(with HEADLINER option)



KONG



ULTRA SUPER KING/KING KONG*



FULL WRAP*

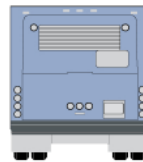
BUS ENDS



TAIL LIGHT



SUPER TAIL



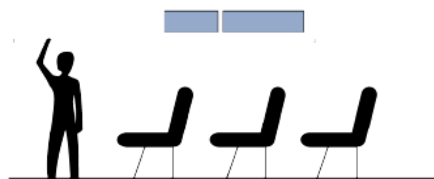
FULL BACK



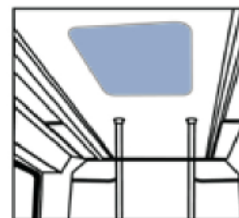
HEADLIGHT

INTERIORS

INTERIOR CARD



MICHEALANGELO



SOURCE: OUTDOOR ADVERTISING ASSOCIATION OF AMERICA, INC. STANDARD BUS MEDIA

APPENDIX C: METHODOLOGY

The qualitative arm of this study included survey responses from fifteen participants during the winter spanning 2012-2013. Responses were gathered through several methods, including: in-person interviews, telephone interviews, and email interviews. Participants belong to a transit agency cohort ($n=9$) and to an advertising agency cohort ($n=5$).

The transit agency sample can be broken down into three sub-categories: Triangle Transit officials ($n=2$), regional peers ($n=5$), and national peers ($n=2$). Triangle Transit officials and regional peers were selected based on their direct involvement or relationship to the policy question. National peers were identified using the Florida Transit Information System's (FTIS) Integrated National Transit Database Analysis System (INTDAS). This tool allows users to search and identify transit agencies based on many variables gathered by the "Federal Transit Administration (FTA) for inclusion in the National Transit Database (NTD)."^{cxii}

The INTDAS tool uses a methodology devised and published by the Transit Cooperative Research Program (TCRP) in TCRP Report 141. The TCRP methodology for peer selection depends on "the type of analysis (rail-specific, non-rail-specific, or agency-wide) and the target agency's urban area size, 3 *screening factors* and up to 14 *peer-grouping factors* are used in the peer selection process " (emphasis in the original).^{cxiii} The screening factors review whether a transit agency has any rail capacity. The peer-grouping factors include five service characteristics and nine urban area characteristics. Table 11 breaks down the TCRP methodology.

The INTDAS tool was also used to identify transit agencies as targets for quantitative data. Advertising rates and advertisement sales growth rates were gathered from a total of twenty-five transit agencies or their advertising contractors. In some cases, quantitative data was gathered during the interview.

RESEARCH DESIGN

I have used a non-probabilistic, purposive sampling strategy to identify relevant stakeholders for this study. In some cases the study sample was based on convenience, though all participants were identified either by their relationship to Triangle Transit or by their designation as peer agencies. Given the relatively small population of peer transit agencies, a large sample was not possible. The small target population also ruled out any efforts for randomization. This research seeks to emulate a stratified approach by including participants from each targeted stratum. This study takes a nested approach in that I gathered interview responses, financial, and technical documents from participants.

TABLE 11: INTDAS SCREENING CHART

Screening Factors		1. Any Rail Capacity
		2. Rail-only Capacity
		3. Heavy Rail Operator
Peer-Grouping Factors	Service Characteristics	1. Total Vehicle Miles Operated
		2. Total Operating Budget
		3. Percent Demand Response
		4. Percent Service Purchased
		5. Service Area Type
	Urban Area Characteristics	1. Urban Area Population
		2. Population Growth Rate
		3. Population Density
		4. State Capital
		5. Percent Pop. w/ College Degree
		6. Annual Delay (hrs) Per Capita
		7. Freeway Lane-Miles Per Capita
		8. Percent Poverty
		9. Distance

SOURCE: TCRP REPORT 141

Interview responses form one arm of this research. The second arm is based on advertisement program data gathered through interviews and through direct requests for information from targeted transit and advertising agencies. The aim of this research is to create a reliable revenue forecasting model based on available data.

Analysis and derivation of these variables was conducted using Microsoft Excel. Excel was selected for two reasons: one, it is more than adequate for the complexity of the work conducted; two, Triangle Transit personnel are familiar with MS Excel and will be able to use the revenue forecasting calculator that was produced for this research, giving them the ability to modify revenue forecast calculations in response to future changes.

RESEARCH PROCEDURE

Participants were initially approached by email in all cases. Contact information was either provided by Triangle Transit or was found online. In a few cases, contact information for a participant was provided by another respondent. Interviews were semi-structured and conducted in-person, by telephone or through email. Participants were asked open-ended questions to gather diverse opinions and to maximize the amount of information gathered.

A set of survey documents was created for this research project. Two separate survey instruments were also created to provide structure in the interviews. One instrument was targeted to transit agency personnel. This instrument contained four sections: Agency Information, Financial Information, Advertising Policy, and Pros & Cons of Advertising. The other instrument was drafted for advertising agency participants. This instrument included sections on: Advertising Policy, Financial Information, Revenue Forecasting, and Pros & Cons of Transit Advertising. All participant responses were transcribed by a third-party contractor.

Transcripts and other documents were analyzed using NVivo 10 software. All transcripts were parsed and categorized based on the questions and topics found in the survey instruments. Participant responses are presented to enrich the existing literature

and to provide policy and business recommendations to Triangle Transit. Responses are also used to reinforce, supplement or contrast with the revenue forecast results.

FORECAST VARIABLES

I have identified 14 variables for inclusion in the revenue forecast. The following list describes each variable. This is followed by a detailed description of the forecast model.

Expenses

Advertising Employee (Φ) – The total value of this variable involves several figures. The base salary of a Triangle Transit marketing employee is \$42,436 with benefit costs of \$7,918 for a total of \$50,354 with an expected annual growth rate of 3%. Intangible costs such as resource usage cannot be quantified in this situation so a flat rate of \$5,000 is used.

$$\Phi = 5,000 + 50,354[1+.03]^T$$

Advertising Sales Commission (Ψ) – The overall cost of the employee will increase should Triangle Transit incentivize this person with a commission. A maximum rate of 5% of gross advertising revenues will be applied.*

$$\Psi = .05\Omega$$

Unidentified Expenses (Λ) – Any additional costs associated with an advertisement program, such as vehicle damage or maintenance due to the placement of advertisements, can be included here.

Revenues

Vehicle Fleet (E) – This variable represents the total number of vehicles within the transit fleet.

* Only two sources of commission rates were identified. One source offered a commission rate on top of salary of 1% – 5% of contracts based on sales. The other source offered a commission rate with no salary of 10% to 15%.

Advertisement Format (F) – Transit vehicles can carry multiple advertisements. Each size of advertisement is covered by this variable. This variable must be weighted.

Advertisement Weight (η) - F must be weighted in order to account for the likelihood of an ad format to be used or the inability to carry an ad format (i.e. a wrapped bus carries no other ads). The format weights have been estimated based on interview responses and factual relationships. Table 12 displays the weights applied in this forecast.

TABLE 12: DERIVED ADVERTISEMENT WEIGHTS

Advertisement	Weight	Advertisement	Weight
Full Wrap	0.1	Full Back	0.05
King Kong	0.0	Super Tail	0.1
King	0.9	Tail	0.85
Queen	0.9	Interior Card	0.5

SOURCE: PARTICIPANT INTERVIEWS

Advertisement Rate (G) – Represents the base cost for one unit of each advertisement format F. This variable must be derived because Triangle Transit has no historical advertisement price data. In order to derive variable G, I gathered advertisement rates from 16 peer agencies for Triangle Transit and 15 peers for DATA. I used the average, median, and mode to identify initial values for G. Tables 13 and 14 present these values.

TABLE 13: ADVERTISEMENT VALUES DERIVED FOR TRIANGLE TRANSIT

Ad	Wrap	King Kong	King	Queen	Full Back	Super Tail	Tail	Interior Card
Average	\$2,085.87	\$702.08	\$306.00	\$237.53	\$547.20	\$267.14	\$229.67	\$26.86
Median	\$2,000.00	\$797.50	\$250.00	\$225.00	\$536.00	\$250.00	\$187.00	\$31.00
Mode	\$2,000.00	\$800.00	\$220.00	\$180.00	\$475.00	---	\$160.00	\$35.00
High	\$3,900.00	\$955.00	\$575.00	\$400.00	\$800.00	\$400.00	\$400.00	\$50.00
Low	\$900.00	\$260.00	\$190.00	\$125.00	\$300.00	\$200.00	\$160.00	\$8.00
Price	\$2,000.00	\$800.00	\$300.00	\$225.00	\$550.00	\$250.00	\$200.00	\$30.00

SOURCE: PEER ANALYSIS

TABLE 14: ADVERTISEMENT VALUES DERIVED FOR DATA

Ad	Wrap	King Kong	King	Queen	Super Tail	Tail	Interior Card
Average	\$2,258.08	\$803.75	\$265.15	\$215.67	\$256.43	\$198.20	\$26.43
Median	\$2,069.00	\$835.00	\$250.00	\$211.50	\$225.00	\$205.00	\$29.00
Mode	\$1,250.00	---	\$200.00	\$180.00	\$200.00	\$160.00	\$30.00
High	\$3,500.00	\$1,100.00	\$450.00	\$280.00	\$375.00	\$250.00	\$35.00
Low	\$1,250.00	\$260.00	\$190.00	\$160.00	\$195.00	\$145.00	\$5.00
Price	\$2,200.00	\$805.00	\$250.00	\$215.00	\$250.00	\$200.00	\$27.00
Current Price*	\$2,200.00	\$795.00	\$225.00	\$210.00	---	---	\$20.00

* These are the prices that Media Transit charged in the past.

SOURCE: PEER ANALYSIS

Many peer agencies offer descending prices for long duration advertising contracts. Of the 25 transit agencies considered in this analysis, 13 offered long term discounts. I analyzed the rates at which advertisement prices were discounted. The results of this analysis can be found in Table 15.

TABLE 15: LONG TERM ADVERTISING CONTRACT DISCOUNTS

	3 month	6 month	12 month
Average	4.50%	5.65%	6.85%
Median	4.50%	5.00%	5.00%
Mode	5%	5%	5%
High	8%	10%	11%
Low	2.5%	2.5%	2.5%

SOURCE: PEER RATE CARD ANALYSIS

Using these figures I created an adjusted rate card that accounts for long duration discounts. I then weighted these discounted rates to account for a certain percentage of total sales of each advertisement format. These weights were estimated based on interview conversations and can be found in Table 16. The total monthly cost for each advertisement that results from these adjustments represents the advertisement rate used as variable G.

TABLE 16: WEIGHTS AND RATES FOR TRIANGLE TRANSIT ADVERTISEMENTS

	1 Month	% Sales	3 Month	% Sales	6 Month	% Sales	12 Month	% Sales	Adjusted Rate
Full Wrap	\$2,000	0.40	\$2,000	0.30	\$1,900	0.20	\$1,805	0.10	\$1960.5
King Kong	\$800	0.40	\$800	0.30	\$760	0.20	\$722	0.10	\$784.2
King	\$300	0.20	\$300	0.40	\$285	0.30	\$271	0.10	\$292.6
Queen	\$225	0.20	\$225	0.40	\$214	0.30	\$203	0.10	\$219.5
Full Back	\$550	0.30	\$550	0.40	\$523	0.20	\$496	0.10	\$539.2
Super Tail	\$250	0.10	\$250	0.40	\$238	0.30	\$226	0.20	\$241.6
Tail	\$200	0.10	\$200	0.40	\$190	0.30	\$181	0.20	\$193.2
Interior	\$300	0.20	\$300	0.50	\$285	0.20	\$271	0.10	\$294.1

Fleet Limits (*H*) – Indicates the number of vehicles authorized to carry each advertisement format. This variable is likely to vary in the case of Full Wraps, which are often limited to a small number of vehicles.

Available Fleet (*I*) – The total percentage of the vehicle fleet authorized to carry advertisements. This figure may vary by vehicle class (i.e. bus, para-transit, etc.)

Promotional Space (*J*) – The total percentage of the available fleet ($E * I$) that will be allocated to Public Service Announcements, co-promotion, and self-promotion materials. Variable *J* may equal zero in several cases. First, if the transit agency plans to allow vehicles that do not carry advertisements to carry public service announcements then this variable is unnecessary. Also, this variable may only apply to certain formats. For example, some agencies only allow PSAs and self-promotion to appear inside a bus. In this case *I* can be applied specifically to the relevant advertisement format.

Average Space Sold (*K*) – A percentage of the available advertising space (excluding promotional space) that is carrying advertisements. This figure can be monthly, seasonal, or annual. It can also be applied to specific vehicles. Due to insufficient data, this figure will be estimated as an annual rate for the entire fleet.

Guaranteed Minimum (*L*) – a minimum guaranteed payment provided by the contractor to the transit agency, regardless of gross revenues.

Revenue Share (M) – The percentage of revenues (irrespective of a minimum payment agreement) that an advertising contractor shares with the transit agency.

In-House Adjustment (Q) – A discount applied to the formula when an agency manages an advertising program in-house. This deduction accounts for several differences between a contractor and an in-house program, including: lack of relationships with advertisers; lack of capacity to facilitate design, installation, and removal of advertisements; and advertisement and vehicle maintenance costs. A rate of 0.8 is used in scenarios for individual agencies, 0.7 is used for all multi-agency scenarios.

Annual Growth Rate (θ) – The annual rate at which advertisement sales grow. This rate will vary year to year. Based on participant interviews, this variable should fall between 3% and 7% annually.

THE FORECAST MODEL

The revenue forecast is best realized with the use of several equations. The first step requires the identification of the maximum amount of revenue that can be generated (P):

$$P = \sum (E_n * [(\eta_1 F_1^{H1} * G_1) * (\eta_2 F_2^{H2} * G_2) * \dots (\eta_n F_n^H * G_n)])$$

The maximum revenue (P) must be adjusted for such considerations as available fleet (I), promotional space (J), and occupancy rate (K). The result of this calculation is Ω :

$$\Omega = PI(1-J)K$$

This amount (Ω) represents the total advertising revenue that can be earned in year zero. In order to forecast future values of Ω , this variable should be compounded:

$$\Omega(1 + \theta)^t$$

One of two operations must be conducted at this point. If Triangle Transit opts to manage advertisement sales in-house then several actions must be considered. First, the in-house adjustment must be factored into the value of Ω . From this product, the various expenses associated with the in-house advertising program must be subtracted.

$$\Delta_1 = (Q * \Omega[1 + \theta]^t) - (\Phi + \Psi) - \Lambda$$

This amount represents the adjusted total advertising revenue that Triangle Transit could expect to earn when managing advertisement sales in-house.

The following operation should be considered in the event that Triangle Transit contracts advertisement sales. This option eliminates the expense of an employee and reduces expenses to zero. However, Triangle Transit will likely contract for a guaranteed minimum amount of revenue (L). If (M) exceeds the guaranteed minimum then Triangle Transit will receive the higher revenue stream.

$$\Delta_2 = L$$

$$\Delta_2 = (\Omega[1 + \theta]^t) * M$$

This amount represents the adjusted total advertising revenue that Triangle Transit could expect to earn when contracting advertisement sales. Subtract Λ in the event of unanticipated expenses.

APPENDIX D: REVENUE FORECAST CALCULATOR INSTRUCTIONS

The revenue forecasts presented in this report were generated using a custom- built Microsoft Excel calculator. Figure 1 below presents the calculator with no data. This calculator is based on the equations and procedures outlined in Appendix C of this report. The following guidelines are intended to guide users of the calculator through the procedures to produce modified revenue forecasts in the future. Suggestions and tips are presented to maximize the calculator’s features.

FIGURE 1: BLANK REVENUE CALCULATOR

Triangle Transit																			
1. Fleet Information:						2. Advertisement Information:													
Buses:	0		Para-Transit:	0		Annual Growth Rate:	0%		6-11 Month Discount:	0.00%									
Percent of Fleet Carrying Advertisements:						0%													
Space For PSAs?						No		Percent:		0%									
3. Sales Information:				4. Rate Information:															
Bus	Para-Trans	Weight	Average % Sold	Advertisement	1-5 Month Rate	Percent of Sales	6-11 Month Rate	Percent of Sales	12+ Month Rate	Percent of Sales	Adjusted Rate Per Bus	Advanced	Monthly Revenue						
Yes	No			Full Wrap			\$0.00			\$0.00	\$0.00	No	\$0.00						
Yes	No			King Kong			\$0.00			\$0.00	\$0.00	No	\$0.00						
Yes	No			King			\$0.00			\$0.00	\$0.00	No	\$0.00						
Yes	No			Queen			\$0.00			\$0.00	\$0.00	No	\$0.00						
Yes	No			Full Back			\$0.00			\$0.00	\$0.00	No	\$0.00						
Yes	No			Super Tail			\$0.00			\$0.00	\$0.00	No	\$0.00						
Yes	No			Tail			\$0.00			\$0.00	\$0.00	No	\$0.00						
Yes	No			Interior			\$0.00			\$0.00	\$0.00	No	\$0.00						
Yes	No						\$0.00			\$0.00	\$0.00	No	\$0.00						
Total Average Monthly Revenue:												\$0.00							
Total Annual Revenue:												\$0.00							
5. In House Scenario:						6. Contracted Scenario:													
Employees:		0		Adjustment Rate:		0%		Minimum Guarantee:		\$0		Annual Growth Rate:		0.00%					
Base Wage:		\$0		Wage Growth Rate:		0%		Percent of Revenue Received by Triangle Transit:				0%							
Equipment Costs:		\$0		Other Expenses:		\$0		Minimum 1st Year Revenue Based on Media Transit Model:						\$0.00					
Total Commissions:		\$0		Commission:		0%		of Sales		Long Term Revenue Estimate:									
Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5		
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		

The revenue calculators are attached to this document and can be found in the under the attachments tab. One calculator is preset to generate revenue calculations for Triangle Transit, another for DATA, and the third for regional advertisement revenues. Each calculator has the same functionality but different figures.

These calculators can be used to run simulations of potential revenues that differ from the scenarios presented in this report. Many variables can be adjusted to explore various outcomes of transit advertising. Guidance on creating and manipulating alternative scenarios is included at the end of this guide. Similar information can be located in the included Microsoft Excel file. When using the Revenue Calculator, it is important to save a new file (or copy the tab) in order to preserve previously calculated

scenarios. This is accomplished by selecting “Save As” under the “File” tab. Always use a clear and understandable name for your saved simulation.

The following step-by-step instructions will allow you to replicate the forecasts presented in the report *Advertising on Triangle Transit: A Revenue Forecast and Policy Analysis*. Additional guidance on altering revenue forecasts follows.

SECTION 1: FLEET INFORMATION

This section records information about the transit fleet. Figure 2 shows this section in detail. The first information to enter is the total number of buses in the fleet, followed by the number of para-transit – or demand response – vehicles operated by the agency. The para-transit vehicles do not need to be entered if no advertisements will be placed on these vehicles.

FIGURE 2: BLANK FLEET INFORMATION SECTION

1. Fleet Information:			
Buses:	0	Para-Transit:	0
Percent of Fleet Carrying Advertisements:			0%
Space For PSAs?	No	Percent:	0%

The second line calls for the percent of fleet carrying advertisements. This value will be applied equally to both buses and para-transit vehicles. The report forecasts assume that 50% of the fleet will carry advertisements.

The third line in this section covers Public Service Announcements and/or self-promotion and co-promotion. If the agency has a policy of setting aside a specific amount of space for this content then this option should be set to ‘Yes’. A drop down menu will appear when this cell is selected. The percent of the available fleet that is set aside for this content should also be filled. Turning on the option for Public Service Announcements will change the revenue figures in the other sections of the calculator. The completed *Fleet Information* section is presented in Figure 3 below.

FIGURE 3: COMPLETED FLEET INFORMATION SECTION

1. Fleet Information:			
Buses:	63	Para-Transit:	14
Percent of Fleet Carrying Advertisements:		50%	
Space For PSAs?	No	Percent:	10%

SECTION 2: ADVERTISEMENT INFORMATION

This section includes information that allows for more precise and nuanced revenue forecasts. The first information to enter in this section is the annual growth rate. The revenue calculator is not equipped to accommodate a variable growth rate and can only process a fixed growth rate. This revenue forecast uses an annual growth rate of 0%.

The Aggregate Average Sales item does not take any data. This section presents an average based on data entered in Section 3. The value in this cell should equal the total average annual sales for an agency. If no average sales data is entered in Section 3 then the cell will return an error. In this forecast, this item will either equal 40% or 65%.

The remaining items to fill require the rates of discount offered for long duration contracts. An analysis conducted for this report found that peer agencies offered long term discounts of 5% for advertising carried between six and eleven months. An additional 5% was taken off for advertisements carried for 12 months or longer (this equals a cumulative discount of 9.75%). These values are used in this forecast; however, long term discounts do not need to be applied for the calculator to work. Figure 4 presents a completed Section 2. If long term discounts are not applied, ensure that the 'Advanced' option is set to 'No' in Section 4.

FIGURE 4: COMPLETED ADVERTISEMENT INFORMATION SECTION

2. Advertisement Information:			
Annual Growth Rate:	0%	6-11 Month Discount:	5.00%
Aggregate Average Sales:	65%	12+ Month Discount:	9.75%

SECTION 3: SALES INFORMATION

This section provides options for the user of the calculator to fine-tune the simulation. Figure 5 presents this section with data already entered. Section 3 has four columns to modify. The first two columns, *Bus* and *Para-Trans*, have a Yes/No option. By setting an individual cell to 'Yes', the calculator

FIGURE 5: SALES INFORMATION SECTION

Sales Information:				Advertisement
Bus	Para-Trans	Weight	Average % Sold	
Yes	No	0.1	50%	Full Wrap
No	No	0.1	65%	King Kong
Yes	No	0.9	80%	King
Yes	No	0.9	80%	Queen
Yes	No	0.05	60%	Full Back
Yes	No	0.2	65%	Super Tail
Yes	No	0.65	70%	Tail
Yes	No	0.5	50%	Interior
No	No	0		

will assume that vehicles carry that advertisement format. For example, in the first row, if you set *Bus* to 'Yes' and *Para-Trans* to 'No', then the calculator will assume buses carry the associated advertisement but para-transit vehicles do not. Setting these values to 'Yes' or 'No' will adjust the figures for Monthly Revenue, Total Annual Revenue, and all figures in Sections 5 and 6 of the calculator.

The third column, *Weight*, includes values between zero and one which potentially reduce the overall earning potential of a particular advertisement. This variable serves several functions. For example, the *Weight* variable can adjust the potential revenue of individual buses or advertisements in situations where only one advertisement can be carried on a bus. For example, this model weights Full Wrap advertisements as 0.1 to indicate that only 10% of the available fleet is authorized to carry Full Wraps. However, if a bus is fully wrapped, then it will not carry any additional exterior advertisements. As a result, both the King and Queen advertisements are weighted at 0.9. The Full Back, Super Tail, and Tail advertisements add up to 0.9 for this reason as well. These weights should be adjusted to better reflect actual advertisement conditions once accurate sales data is available.

The fourth column of this Section, *Average Percent Sold*, can be adjusted to represent each individual advertisement format. The average of these individual averages is presented in Section 2 as the *Aggregate Average Sales*. Figure 6 includes the values that produce an aggregate average sales percentage of 65%. The final row

of this section is left blank for the inclusion of additional advertisement formats in the future.

SECTION 4: RATE INFORMATION

This section displays the base rates for all advertisements, as well as the long term discounted rates based on the percentages entered in Section 2. Figure 6 presents this Section with all values included.

FIGURE 6: COMPLETED RATE INFORMATION SECTION

Rate Information:									
Advertisement	1-5 Month Rate	Percent of Sales	6-11 Month Rate	Percent of Sales	12+ Month Rate	Percent of Sales	Adjusted Rate Per Bus	Advanced	Monthly Revenue
Full Wrap	\$2,000	0.70	\$1,900.00	0.20	\$1,805.00	0.10	\$1,960.50	Yes	\$3,087.79
King Kong	\$800	0.70	\$760.00	0.20	\$722.00	0.10	\$784.20	Yes	\$0.00
King	\$300	0.60	\$285.00	0.30	\$270.75	0.10	\$292.58	Yes	\$6,635.60
Queen	\$225	0.60	\$213.75	0.30	\$203.06	0.10	\$219.43	Yes	\$4,976.70
Full Back	\$550	0.70	\$522.50	0.20	\$496.38	0.10	\$539.14	Yes	\$509.48
Super Tail	\$250	0.50	\$237.50	0.30	\$225.63	0.20	\$241.38	Yes	\$988.43
Tail	\$200	0.50	\$190.00	0.30	\$180.50	0.20	\$193.10	Yes	\$2,767.61
Interior	\$300	0.70	\$285.00	0.20	\$270.75	0.10	\$294.08	Yes	\$2,315.84
		0.00		0.00		0.00	\$0.00	No	\$0.00
Total Average Monthly Revenue:									\$21,281.45
Total Annual Revenue:									\$255,377.41

In order to make this section functional, you must at least have the base advertisement rates for the transit agency. These rates should be entered in the column titled *1-5 Month Rate*. Once these values are entered, the values for the *6-11 Month Rate* and *12+Month Rate* will automatically be filled.

Each of these columns has an associated *Percent of Sales* column. These columns should be filled with historical sales data (when available) to reflect what percentage of total sales of an individual advertisement falls under each rate. For example, Figure 7 indicates that 60% of Kings sold are for less than six months, 30% are for more than six but less than 12 months, and only 10% are for greater than 12 months. Based on these sales percentages, an *Adjusted Rate Per Bus* is automatically calculated. This rate allows for more accurate forecasts of the monthly earning potential per advertisement, per bus.

If historical sales data are available and you want the forecast to account for this information, you must set the *Advanced* column to 'Yes' for each advertisement. If you

only have the base advertisement rates, you must set the *Advanced* column to 'No', otherwise the calculator will generate an error.

This completes all the data necessary to generate gross monthly and annual total sales revenue for a transit agency. However, these figures should not be used as final revenue forecasts; final forecasts can be found in Sections 5 and 6 of the calculator.

SECTION 5: IN HOUSE SCENARIO

This section takes the gross annual revenue projection and modifies it to produce a more accurate revenue forecast. Specifically, this section forecasts the revenues and expenses of managing advertisement sales in-house. The end result of this section will be annual revenue projections for up to six years. Please note that the longer the forecast, the less reliable the net revenue projection. Figure 7 shows Section 5 with no data entered.

FIGURE 7: BLANK IN HOUSE SCENARIO SECTION

5. In House Scenario:					
Employees:	0	Adjustment Rate:	0%		
Base Wage:	\$0	Wage Growth Rate:	0%		
Equipment Costs:	\$0	Other Expenses:	\$0		
Total Commissions:	\$0	Commission:	0%	of Sales	
Long Term Revenue Estimate:					
Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$0	\$0	\$0	\$0	\$0	\$0

There are several pieces of information that need to be imputed in this section to finalize a revenue forecast. First, the adjustment rate in the upper right corner of this section must be set. This rate modifies the expected gross annual revenue to account for several factors. The in-house scenario has several disadvantages, such as fewer sales staff, weak relationships with advertisers, and a general lack of advertisement sales systems and experience. As a result of these disadvantages, expected sales under in-house management are expected to be lower than under a contractor. The forecast model in this report sets the Adjustment Rate to 80% (0.80) for single agency scenarios and 70% (0.70) for multi-agency scenarios.

The remaining information should be straightforward. Enter the number of employees who will be selling advertisements for the agency. The *Base Wage* variable should also include the costs of associated benefits. If an expected wage and benefit growth rate is known, then enter that value in the *Wage Growth Rate* cell. *Equipment Costs* per employee can be entered, as can any other expenses associated with the advertising program. The *Other Expenses* item may include the cost of insuring the advertising program, vehicle maintenance, or legal fees.

The final item to enter is a commission percentage (if any). The calculator can only account for a commission percentage as a share of adjusted gross sales and cannot handle individual sales incentives. If a complex commission and incentives package is used, try to identify an average annual percentage of adjusted gross sales that this package represents. Once a commission percentage is entered, *Total Commissions* will be automatically generated.

With all of this data entered, revenue forecasts for the next several years are generated. These forecasts account for the annual sales growth rate entered in Section 2 as well as the wage growth rate entered in this section. The net revenues for years zero through five are the final revenue forecasts for this scenario. Figure 8 shows this section when fully populated.

FIGURE 8: COMPLETED IN HOUSE SCENARIO SECTION

5. In House Scenario:					
Employees:	1	Adjustment Rate:	80%		
Base Wage:	\$50,354	Wage Growth Rate:	3%		
Equipment Costs:	\$5,000	Other Expenses:	\$0		
Total Commissions:	\$12,769	Commission:	5%	of Sales	
Long Term Revenue Estimate:					
Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$136,179	\$134,668	\$133,113	\$131,510	\$129,859	\$128,159

SECTION 6: CONTRACTED SCENARIO

This section will provide forecasts of net revenue received by a transit agency under a contract for advertisement sales. Very little data is needed to complete this section. If advertisement sales will be contracted then input the value of the minimum

guarantee and the percentage of total revenues that the agency will receive if higher than the minimum guarantee. The annual growth rate will automatically be filled with the value entered in Section 2. *Annual Growth Rate* should only be modified in Section 2.

There is no other data to enter in this section. Section 6 provides two different revenue estimates: first, it provides the *Minimum 1st Year Revenue Based on Media Transit Model*. This value is based on the transit industry calculation of number of buses, times \$150, times 12 months. This value is a likely first year estimate of actual net advertising revenues earned by the transit agency. The second revenue forecast is a multi-year forecast similar to that offered in Section 5. Figure 9 shows this section when completed.

FIGURE 9: COMPLETED CONTRACTED SCENARIO SECTION

6. Contracted Scenario:					
Minimum Guarantee:	\$50,000	Annual Growth Rate:	0.00%		
Percent of Revenue Received by Triangle Transit:			60%		
Minimum 1st Year Revenue Based on Media Transit Model:			\$68,040.00		
Long Term Revenue Estimate:					
Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$153,226	\$153,226	\$153,226	\$153,226	\$153,226	\$153,226

The long term revenue estimates provided in Sections 5 and 6 of the revenue calculator provide the final net revenue forecast for transit advertisement sales for a transit fleet. Many of these variables can be modified to fine-tune the results or to explore alternative options. Figure 10 (below) presents the fully populated revenue calculator.

SECTION 7: CONSTRUCTING NEW SCENARIOS

The step-by-step instructions presented familiarize the user with each variable of the revenue calculator. However, certain variables are more likely to change on a regular basis. These variables should be adjusted when constructing new or updated revenue simulations. Remember, when creating new revenue simulations, you should copy the tab you are working with or “Save As” the file before making changes. Use a clear and understandable name for your new file. Figure 10 above can be used as a reference for the following guidelines.

FIGURE 10: COMPLETED REVENUE CALCULATOR

Triangle Transit																			
1. Fleet Information:					2. Advertisement Information:														
Buses:	63			Para-Transit:	14			Annual Growth Rate:	0%		6-11 Month Discount:	5.00%							
Percent of Fleet Carrying Advertisements:					50%					Aggregate Average Sales:				65%		12+ Month Discount:		9.75%	
Space For PSAs?					No					Percent:				10%					
3. Sales Information:					4. Rate Information:									Monthly Revenue					
Bus	Para-Trans	Weight	Average % Sold	Advertisement	1-5 Month Rate	Percent of Sales	6-11 Month Rate	Percent of Sales	12+ Month Rate	Percent of Sales	Adjusted Rate Per Bus	Advanced	Monthly Revenue						
Yes	No	0.1	50%	Full Wrap	\$2,000	0.70	\$1,900.00	0.20	\$1,805.00	0.10	\$1,960.50	Yes	\$3,087.79						
No	No	0.1	65%	King Kong	\$800	0.70	\$760.00	0.20	\$722.00	0.10	\$784.20	Yes	\$0.00						
Yes	No	0.9	80%	King	\$300	0.60	\$285.00	0.30	\$270.75	0.10	\$292.58	Yes	\$6,635.60						
Yes	No	0.9	80%	Queen	\$225	0.60	\$213.75	0.30	\$203.06	0.10	\$219.43	Yes	\$4,976.70						
Yes	No	0.05	60%	Full Back	\$550	0.70	\$522.50	0.20	\$496.38	0.10	\$539.14	Yes	\$509.48						
Yes	No	0.2	65%	Super Tail	\$250	0.50	\$237.50	0.30	\$225.63	0.20	\$241.38	Yes	\$988.43						
Yes	No	0.65	70%	Tail	\$200	0.50	\$190.00	0.30	\$180.50	0.20	\$193.10	Yes	\$2,767.61						
Yes	No	0.5	50%	Interior	\$300	0.70	\$285.00	0.20	\$270.75	0.10	\$294.08	Yes	\$2,315.84						
No	No	0				0.00		0.00		0.00	\$0.00	No	\$0.00						
Total Average Monthly Revenue:												\$21,281.45							
Total Annual Revenue:												\$255,377.41							
5. In House Scenario:					6. Contracted Scenario:														
Employees:	1			Adjustment Rate:	80%			Minimum Guarantee:	\$50,000		Annual Growth Rate:	0.00%							
Base Wage:	\$50,354			Wage Growth Rate:	3%			Percent of Revenue Received by Triangle Transit:					60%						
Equipment Costs:	\$5,000			Other Expenses:	\$0			Minimum 1st Year Revenue Based on Media Transit Model:					\$68,040.00						
Total Commissions:	\$12,769			Commission:	5% of Sales			Long Term Revenue Estimate:											
Year 0	Year 1	Year 2	Year 3	Year 4	Year 5														
\$136,179	\$134,668	\$133,113	\$131,510	\$129,859	\$128,159	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5								
						\$153,226	\$153,226	\$153,226	\$153,226	\$153,226	\$153,226								

First look at Section 1 of the Revenue Calculator. Has the number of buses and demand response vehicles in the transit fleet changed? If so, update these numbers. The percent of the fleet carrying advertisements and amount of space dedicated to PSAs are only likely to change if a new transit advertising policy is adopted. These variables can usually be left unchanged.

Section 2 contains three variables: the annual growth rate and the long term sales discounts. The annual growth rate may be adjusted on an annual basis once historical sales data is available. This variable may also be adjusted to create optimistic sales scenarios. The long-term sales discounts will likely be set with the adoption of a transit advertising policy. These variables may be altered in creating a new revenue scenario. Nonetheless, these variables usually will not change and can be overlooked.

Section 3 presents several variables that can be adjusted in updating or creating revenue scenarios. If a transit agency wishes to explore placing advertisements on demand response vehicles or discontinuing a certain advertisement format, those options can be explored here. The *Weight* variable (explained above and in Appendix C) should not be modified unless historical data is available to update it. The average percent sold should also be updated based on historical data. Average percent sold can also be updated to explore hypothetical revenue scenarios.

Section 4 contains several variables that can be modified to create new simulations. The base rate for advertisements, found in the column *1 – 5 Rate*, will not generally be changed, though modifications can be made if new advertisement rates are being considered. The three *Percent of Sales* columns should only be adjusted to reflect historical data. Modifying these columns with no reinforcing data will not produce accurate revenue forecasts.

Section 5 has several variables that can be changed. Making changes in this section is recommended if the simulation seeks to reduce the cost of employees or to explore the impacts of providing better benefits to advertising employees. The end-user of the calculator can adjust the number of employees, the annual growth of their wages and benefits, or the amount of commission they earn from sales. Changes to the adjustment rate are not recommended. (For more information about the adjustment rate, refer to Appendix C.)

Section 6 only contains two variables that should be changed in revenue simulations: the minimum guarantee and the percentage of revenue share. These variables should be changed if the end-user seeks to simulate different contract conditions, perhaps to represent the revenue sharing conditions of competing contractors.

In closing, hypothetical revenue simulations can be executed by making changes to relatively few variables, to include: percent of fleet carrying advertisements, annual sales growth rate, the base cost for advertisements, average percent sold, employee information, and contract information. Adjustments to other variables are not recommended and reduce the validity of revenue simulations if the adjustments are not based on accurate data. Be thoughtful in adjusting variables for new revenue simulations.

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