The Business and Spatial Evolution of Retailing: Implications for Tren Urbano

by

Randy J. Knapick

B.S., Civil and Environmental Engineering (1998)
B. Phil., Urban Planning and Design (1998)

University of Pittsburgh

Submitted to the Department of Civil and Environmental Engineering
in Partial Fulfillment of the Requirements for the Degree of
Master of Science in Transportation

at the

Massachusetts Institute of Technology

June 2000

© Massachusetts Institute of Technology
All rights reserved

Signature of Author.......................................................... Department of Civil and Environmental Engineering
May 16, 2000

Certified by.............................................................. Kenneth E. Kuckemeyer
Research Associate
Center for Transportation Studies
Thesis Supervisor

Accepted by.......................................................... Daniele Veneziano
Chair, Department Committee on Graduate Studies
The Business and Spatial Evolution of Retailing: Implications for Tren Urbano

by

Randy J. Knapick

Submitted to the Department of Civil and Environmental Engineering on May 15, 2000 in partial fulfillment of the requirements for the degree of Master of Science in Transportation

ABSTRACT

The retail industry is in a continual state of evolution due to competitive forces, technology, and changes in consumer preferences and lifestyles. A prerequisite of planning and designing for successful transit-oriented retail development is understanding how evolutionary forces in retailing have changed the spatial and transportation characteristics of that industry since the 'heyday of urban transit' in the early- to mid- twentieth century. This thesis examines the implications of these changes for contemporary transit, specifically the Tren Urbano heavy rail rapid transit system under construction in San Juan, Puerto Rico.

This research suggests that the centerlessness and scale of contemporary mass-market retailers places transit at a disadvantage in modern cities. The pervasiveness of the automobile allows retailers to capitalize on economies of scale, large product lines, or product specialization founded on the consumers' ability to travel long distances quickly and purchase in bulk quantities. The value of central locations, such as CBDs or transit station areas, is diminished by consumers’ high mobility, the large scale of retail venues, and the spatial shifting of retail activity due to rapid competitive and functional obsolescence of purpose-built retail space. Furthermore, risk-averse development practices tend to favor proven retail architectural formats and unencumbered land parcels with convenient automobile access.

Nonetheless, even large-scale retail venues and chain stores have been adapted to unorthodox station-area and urban formats when favorable market conditions exist. The impact of transit-oriented locations on the modal split of these retailers has not been established conclusively. Transit-oriented retailing fares best in environments with an established transit constituency, suggesting that retail development around new transit stations will lag behind development of housing and employment, and expand gradually in proportion to the overall transit population.

Public agencies can facilitate transit retail development by: remaining mindful of market and competitive conditions in station location, planning and design; reserving parcels with high dual transit and automobile visibility for retailing; establishing a development liaison to field inquiries, disseminate information, and publicize opportunities; creating clear, development-friendly regulations and permitting processes to reduce project lead-time and risk. On the consumer side, public agencies can promote shopping by transit through fare and transfer policies that encourage stopovers and trip-chaining; provision of information, advertisements, and maps throughout the system; maintaining ‘readable’ and pleasant pedestrian connections between stations and retail venues; and designing station areas so that retail opportunities are visible from transit vehicles and station headhouses.

Thesis Supervisor: Kenneth E. Kruckemeyer

Title: Research Associate, Civil and Environmental Engineering
Acknowledgements

First, a very sincere thank you to Ken Kruckemeyer, my thesis advisor, friend, and a professional of high principles. We’ve had many great talks during those 8:30 AM Friday thesis meetings, occasionally about my thesis. Ken is one of a few special teachers who motivates not with carrots, not with sticks, but with an inspiring personal example. Maybe some day we will work together again.

Thank you also to the faculty of the Tren Urbano project and the MIT Center for Transportation Studies, particularly: Nigel H. M. Wilson, my academic advisor and source of much wit and wisdom; Fred Salvucci, from whom I can never have learned enough about the ‘voodoo’ of urban transportation; Bill Anderson; Joe Sussman; Joe Coughlin; and Mike Shiffler. It has been an honor to be a student of some of the most accomplished individuals in the transportation field. I hope that I can look back and say that my professional career had the same sense of purpose and accomplishment as theirs.

The Tren Urbano UPR/MIT Professional Development Program is a fantastic forum for bringing ideas and cultures together (and having fun doing so), escaping January Boston blizzards, and giving added importance to graduate thesis work. Making this program tick are dozens of fantastic individuals, especially Lydia Mercado, the program liaison at the Tren Urbano Office. The insights of Jeff Squires, Elmo Ortiz, Al Raine, Byron Gilchrest, Manuel De Lemos, Anibal Sepulveda, and Esteban Sennyey were particularly helpful in the course of my research. Thanks also to the entire professional and support staff of the Tren Urbano project—you’ve shown us everything from the depths of the Rio Piedras tunnel to the best Criollo restaurants between Ave. Jesus T. Piñero and anywhere.

Thanks are due to some fine folks my alma mater, the University of Pittsburgh, who helped lay the foundations of this research and my professional career. In particular: Dr. A.G.R. Bullen, my undergraduate civil engineering advisor; James DeAngelis, Graduate School of Public and International Affairs; and Dr. G. Alec ‘Doc’ Stewart, Dean of the University Honors College and champion of human attainment. Through the generosity of the Honors College, I was able to pursue extensive independent studies, meet professionals at conferences and in their ‘natural habitats,’ and visit innovative planning and transportation projects around the country. Thanks also to Dr. Susan Handy, a noted scholar of non-work travel behavior, and the others at the University of Texas Advanced Institute for Infrastructure Engineering and Management, for a great Undergraduate Summer Internship in Transportation in 1996.

I’ve made great friends among my classmates at MIT, and many of those bonds will continue long after we leave here. Thanks especially to the San Juan crew of January 1999 and 2000, and some great couples: Jon and Carla, Lora and Gary, Jo and Chris, Tracy and David, Elton and Lisa. We’ll always have a wine glass and a place at the table for you in Connecticut.

My parents, my brother Gary, and my entire family have provided enormous support throughout the years. This project is the culmination of a long educational journey and a lot of hard work, which the have made possible for me. Thank you.

Finally, I would like to express my deepest gratitude to my fiancée Stephanie, to whom this work is dedicated, for her patience, encouragement, and companionship. (We can uncork the Perrier Jouët now!) Often she has had to carry more than her share of the weight in these busy and challenging years. She has also been a huge help in the production of this document, including preparation of many of the nice diagrams found within. Thank you, Sweetie. You’re the best.
## Table of Contents

Abstract .......................................................... 3

Acknowledgements .................................................. 4

**Part I: Transit in the Contemporary Retail Environment** ............................. 11

Chapter One
Introduction: Retailing, Transit, and Urban Form ........................................... 13

1.1. Introduction .......................................................... 13
1.2. Motivation .................................................................. 15
   1.2.1. Rail Transit in the Automotive City ....................... 15
   1.2.2. Why Study Transit Retailing? ....................... 16
   1.2.3. Evolution in the Retail Industry ....................... 16
1.3. A Vision for Transit Retailing .................................. 21
   1.3.1. A Definition of ‘Successful’ Transit Retailing .......... 21
   1.3.2. Theories of Transit-Oriented Development .......... 21
   1.3.3. Theories of Transit-Oriented Retailing .......... 22
1.4. Research Objectives and Methodology ..................... 28
   1.4.1. Research Objectives ...................................... 28
   1.4.2. Research Approach ...................................... 28
   1.4.3. Research Methodology .................................. 28
1.5. The Tren Urbano Context ........................................ 31
1.6. Organization of this Document ................................ 34

Chapter Two
Retail Evolution, Competition, and Location ................................................. 37

2.1. Introduction .......................................................... 37
2.2. Evolution in Retailing ............................................. 39
2.3. Automobile Impacts on Retail Evolution .................... 42
2.4. Contemporary Retail Organization ............................. 46
2.5. Dominant Retail Formats ....................................... 51
2.6. Adaptation in the Face of Competition ...................... 52
2.7. Future Evolutions in Retailing .................................. 53
   2.7.1. Internet Retailing ....................................... 53
   2.7.2. Urban Retailing ........................................ 53
2.8. Spatial Manifestations of Retail Evolution .................. 54
   2.8.1. Retail Development Literature ........................ 54
   2.8.2. Key Spatial Phenomena of Contemporary Retailing ...... 54
      2.8.2.1. The Demise of the ‘Hot Corner’ .................. 54
      2.8.2.2. Overstoring ....................................... 55
      2.8.2.3. Leapfrog Development ............................ 55

- 5 -
<table>
<thead>
<tr>
<th>Table of Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.9. Conclusion 60</td>
</tr>
<tr>
<td><strong>Chapter Three</strong></td>
</tr>
<tr>
<td>The Practice of Retail Development 63</td>
</tr>
<tr>
<td>3.1. Introduction 63</td>
</tr>
<tr>
<td>3.2. Development Risk 65</td>
</tr>
<tr>
<td>3.2.1 Completion Risk</td>
</tr>
<tr>
<td>3.2.2 Market Risk</td>
</tr>
<tr>
<td>3.3. Project Financing 66</td>
</tr>
<tr>
<td>3.4. Development Innovations of the Shopping Center 67</td>
</tr>
<tr>
<td>3.5. Major Considerations in the Retail Development Process 70</td>
</tr>
<tr>
<td>3.6. Conclusion 71</td>
</tr>
<tr>
<td><strong>Chapter Four</strong></td>
</tr>
<tr>
<td>Implications of Retail Evolution for Transit Retailing 73</td>
</tr>
<tr>
<td>4.1. Introduction 73</td>
</tr>
<tr>
<td>4.2. Urban Form and Non-Work Travel Literature 74</td>
</tr>
<tr>
<td>4.3. Characteristics and Needs of Transit Retailing 76</td>
</tr>
<tr>
<td>4.4. Transit Retailing: Competitive Challenges 78</td>
</tr>
<tr>
<td>4.5. Transitional Considerations for Transit Retailing 81</td>
</tr>
<tr>
<td>4.5.1 Leader or Follower of TOD?</td>
</tr>
<tr>
<td>4.5.2 Station-Area Functional Conflicts</td>
</tr>
<tr>
<td>4.5.3 Conflicting Modal Requirements of TOD and Retailing</td>
</tr>
<tr>
<td>4.6. Conclusion 85</td>
</tr>
<tr>
<td><strong>Chapter Five</strong></td>
</tr>
<tr>
<td>Promoting Transit Retailing 87</td>
</tr>
<tr>
<td>5.1. Introduction 87</td>
</tr>
<tr>
<td>5.2. Challenges for Transit Retailing 89</td>
</tr>
<tr>
<td>5.3. The North American Transit Retail Experience 90</td>
</tr>
<tr>
<td>5.3.1 Overview of North American Transit Retail Projects</td>
</tr>
<tr>
<td>5.3.2 Implementation Strategies</td>
</tr>
<tr>
<td>5.4. Understanding the Transit Retail Market 95</td>
</tr>
<tr>
<td>5.4.1 System-Level Evaluations</td>
</tr>
<tr>
<td>5.4.2 Evaluation of Station Area Opportunities</td>
</tr>
<tr>
<td>5.5. Station-Area Planning and Visioning 100</td>
</tr>
<tr>
<td>5.6. Marketing Transit Development 102</td>
</tr>
<tr>
<td>5.7. Promoting Effective Public-Private Cooperation 103</td>
</tr>
<tr>
<td>5.8. Provision of Development Incentives 104</td>
</tr>
<tr>
<td>5.9. Conclusion 108</td>
</tr>
</tbody>
</table>
# Table of Contents

**Part II: Transit Retailing in San Juan**

### Chapter Six
**An Overview of Transit and Retailing in San Juan**

6.1. Introduction 115
6.2. Organization of Part II 117
6.3. Overview of San Juan and Tren Urbano 117
6.4. Physical & Competitive Landscape of the San Juan Retail Sector 121
   6.4.1. Introduction
   6.4.2. History of Retail Development
6.5. San Juan Retail Geography 124
6.6. Competitive Forces in San Juan Retailing 126
6.7. Conclusion 131

### Chapter Seven
**The Retail Potential of Tren Urbano**

7.1. Introduction 133
7.2. Tren Urbano’s Relationship to the Existing Retail Landscape 134
   7.2.1. Overview
   7.2.2. Interface with Transit-Oriented Districts
   7.2.3. Interface with Automobile-Oriented Districts
7.3. System-Level Considerations 138
   7.3.1. Overview
   7.3.2. Transit Retailing Demand Side: Tren Urbano Ridership Characteristics
   7.3.3. Fare Policy
   7.3.4. Tren Urbano Concession Program
   7.3.5. Tren Urbano Plazas
7.4. Retail Analysis of Individual Station Areas 146
   7.4.1. Overview
   7.4.2. Methodology
7.5. Key Station-Area Retail Development Opportunities 152
7.6. Conclusion 155

### Chapter Eight
**Institutional and Policy Framework of Tren Urbano**

8.1. Introduction 161
8.2. Current Institutional Framework of Station-Area Development in San Juan
   8.2.1. Puerto Rico Highway and Transportation Authority (PRHTA)
   8.2.2. Puerto Rico Planning Board (Junta de Planificación)
Table of Contents

8.2.3. The Policy and Special Interagency Committees
8.2.4. Municipalities
  8.2.4.1. San Juan Municipality
  8.2.4.2. Guaynabo Municipality
  8.2.4.3. Bayamón Municipality
8.3. Attitudes and Perceptions of Retailers and Developers
8.4. Implications of Institutional Framework for Transit Retailing
8.5. Rationale for Increased Interagency Cooperation
8.6. Conclusion

Chapter Nine
A Transit Retail Development Strategy for Tren Urbano

9.1. Introduction
9.2. Goals and Objectives for Transit Retailing in San Juan
9.3. Market Opportunities for Tran Urbano Transit Retailing
  9.3.1. Overall Role of Tren Urbano in the Retail Market
  9.3.2. Promising Retail Typologies
    9.3.2.1. Station Concessions
    9.3.2.2. Neighborhood-Level Services for TODs
    9.3.2.3. Regional Transit-Accessible Centers
    9.3.2.4. Urban Entertainment and Promenade Districts
    9.3.2.5. Large-Scale Retailers
9.4. Phasing Issues for Transit Retail Development
  9.4.1. Retail Development as a Leader or Follower of TOD?
  9.4.2. Relative Phasing of TOD Land Uses
  9.4.3. Development Market Timing
9.5. Implementation Needs
  9.5.1. Market Studies
  9.5.2. Informing the Development Community
  9.5.3. ‘Early Success’ Demonstration Projects
  9.5.4. Identifying Development Incentives
  9.5.5. Reinforcing Competitiveness of Existing Transit Retailers
9.6. Institutional Preparedness for Transit Retailing
  9.6.1. Identification of a TOD Lead Agency
  9.6.2. Benefits of Inter-Agency Cooperation
9.7. Transit System Policy and Design Considerations
  9.7.1. Fare Policy
  9.7.2. Store Visibility
  9.7.3. ‘Readable’ Pedestrian Linkages
  9.7.4. Passenger and Customer Information
9.8. Considerations for Future Alignments
9.9. Conclusions
Chapter Ten
Conclusion: Prospects for Transit Retailing

10.1. Introduction
10.2. Challenges to Transit Retailing
  10.2.1. The Scale of Contemporary Retailing
  10.2.2. Creating a Sustained Commercial 'Value of Place' in TODs
  10.2.3. The 'Hot Corner' and Problems of Spatial Migration
  10.2.4. Consumer Drawbacks of Transit Travel
  10.2.5. Summary
10.3. Market Opportunities for Transit Retailing
  10.3.1. Convenience and Concession Retail
  10.3.2. Transit-Oriented Neighborhood Services
  10.3.3. Regional-Scale Urban Promenades
  10.3.4. Transit-Oriented 'Bog Box' Retail
10.4. Implementation in Transitional Environments
  10.4.1. System Development Decisions Influencing Retail Potential
  10.4.2. Transit Retailing: Leader or Follower of TOD?
  10.4.3. Building a Transit Retail 'Critical Mass'
10.5. Institutional Considerations
10.6. Proactive Strategies to Promote Transit Retailing
  10.6.1. A Retail-Sensitive Approach to Transit System Development
  10.6.2. Understanding the Transit Retail Market
  10.6.3. Identifying and Reinforcing Transit's Competitive Assets
  10.6.4. Development Advocacy, Outreach, and Information
  10.6.5. Development-Friendly Approval and Permitting
  10.6.6. Showcase Projects
  10.6.7. Bridging Financial Gaps
  10.6.8. Reaching Out to Transit Shoppers
10.7. Private-Sector Reinforcement of Transit Retailing
10.8. Opportunities for Future Research
  10.8.1. General Research on Transit Retailing
  10.8.2. Tren Urbano Research
    10.8.2.1. Institutional Arrangements for TOD
    10.8.2.2. Review of Development Approval Practices, Regulations, and Incentives
    10.8.2.3. Transit Market Analysis
    10.8.2.4. Station-Level Planning, Market, and Development Analyses
### Appendixes

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A</td>
<td>225</td>
</tr>
<tr>
<td>Design Considerations for Transit Retailing</td>
<td></td>
</tr>
<tr>
<td>A.1. Introduction</td>
<td>225</td>
</tr>
<tr>
<td>A.2. Non-Conventional and TOD Applications of Large-Scale Retailers</td>
<td>225</td>
</tr>
<tr>
<td>A.3. Key Elements of Physical Design for Transit Retailing</td>
<td>236</td>
</tr>
<tr>
<td>Appendix B</td>
<td>247</td>
</tr>
<tr>
<td>Sample Informational Materials for Transit-Oriented and Urban Development</td>
<td></td>
</tr>
<tr>
<td>Appendix C</td>
<td>255</td>
</tr>
<tr>
<td>Retail Analysis of Individual Station Areas</td>
<td></td>
</tr>
<tr>
<td>C.1. Introduction</td>
<td>255</td>
</tr>
<tr>
<td>C.2. Analysis of Station Areas</td>
<td>255</td>
</tr>
<tr>
<td>C.2.1. Bayamón</td>
<td></td>
</tr>
<tr>
<td>C.2.2. Deportivo</td>
<td></td>
</tr>
<tr>
<td>C.2.3. Jardines</td>
<td></td>
</tr>
<tr>
<td>C.2.4. Torrimar</td>
<td></td>
</tr>
<tr>
<td>C.2.5. Martinez Nadal</td>
<td></td>
</tr>
<tr>
<td>C.2.6. Las Lomas</td>
<td></td>
</tr>
<tr>
<td>C.2.7. San Francisco</td>
<td></td>
</tr>
<tr>
<td>C.2.8. Centro Medico</td>
<td></td>
</tr>
<tr>
<td>C.2.9. Cupey</td>
<td></td>
</tr>
<tr>
<td>C.2.10. Rio Piedras</td>
<td></td>
</tr>
<tr>
<td>C.2.11. Universidad</td>
<td></td>
</tr>
<tr>
<td>C.2.12. Piñero</td>
<td></td>
</tr>
<tr>
<td>C.2.13. Domenech</td>
<td></td>
</tr>
<tr>
<td>C.2.14. Roosevelt</td>
<td></td>
</tr>
<tr>
<td>C.2.15. Hato Rey</td>
<td></td>
</tr>
<tr>
<td>C.2.16. Sagrado Corazón</td>
<td></td>
</tr>
</tbody>
</table>

### References

- 10 -
Part I:
Transit in the Contemporary Retail Environment

Chapter One:
Introduction: Transit, Retailing, and Urban Form

Chapter Two:
Retail Evolution, Location, and Competition

Chapter Three:
The Practice of Retail Development

Chapter Four:
Implications of Retail Evolution for Transit Retailing

Chapter Five:
Promoting Transit Retailing
Chapter One

Introduction: Retailing, Transit, and Urban Form

1.1 Introduction

There is increasing interest among transit professionals for encouraging mixed-use, pedestrian-oriented development in the vicinity of fixed transit facilities, to improve the effectiveness of transit in contemporary American cities. So-called ‘Transit-Oriented Development’ (TOD) directs urban growth and activity, and therefore travel demand, to locations well served by non-automotive means of transportation. This in turn reinforces the public infrastructure investment in transit systems, and increase the ridership base of those systems. For the traveling public, TOD increases both the quantity and variety of destinations accessible by transit, making non-automotive travel a viable option for a larger number of trips.

Attracting non-work travel demand to transit, such as shopping, is crucial in the creation of truly multi-modal cities, alleviating automobile congestion, and increasing the viability and market share of transit. This research examines the implications of retail industry structure and behavior for the feasibility of transit-supportive retail development. Of particular interest are the evolutions of the retail industry in the half-century since the heyday of urban transit in the United States, which may dilute the effectiveness of vintage models for urban commercial development.

The retail industry is in constant evolution in response to economic, technological, social, and competitive stimuli. The private-sector business decisions undergirding retail development can have a substantial impact on urban transportation patterns and travel
demand, by shifting the location of retail activity and the shopping habits of consumers. The relationships among retail development and transit ridership are little understood, but are increasingly relevant as interest in transit-supportive land use increases.

A clearer understanding of retailing and retail development is necessary to discern the competitive advantages and disadvantages of retail development in transit station areas. This knowledge will better inform transportation and land use policy, and can contribute to comprehensive station-area development programs.

There is presently a vigorous professional debate about the viability of transit-oriented development for altering travel demand and reducing automobile dependence, about its potential for reshaping existing low-density cities, and about its relevance to the lifestyles and desires of the American public. Nonetheless, for the hundreds of existing and planned transit station areas in the United States, and for the thousands of older communities where transit already vital part of the transportation system, there are a number of outstanding questions about how to adapt new retail forms and infill developments to these environments so that they remain viable places to live. In addition, for those regions who have chosen (or may in the future choose) transit-oriented growth as a way to protect quality of life, it is important to understand the economic, spatial, and development pressures that have evolved in retailing over the automobile era.

This research applies its general findings to Tren Urbano, a heavy-rail transit system now under construction in San Juan, Puerto Rico. The document culminates in a retail development strategy for Tren Urbano, which as part of a comprehensive station-area planning initiative can help decision-makers and practitioners adopt policies and practices that maximize the retail potential of the system. This strategy is based on an examination of the existing retail landscape of the San Juan Metropolitan Area, of the key retail development opportunities associated with the system, and of major policy and institutional considerations in the implementation of this strategy.
1.2 Motivation

1.2.1. Rail Transit in the Automotive City

The resurgence of new rail transit investments in North America has been fueled by the perceived shortcomings of an urban transportation system that relies too heavily on automobile travel. Some of the maladies associated with this alleged over-dependence include: increased urban and suburban congestion, and the prohibitive expenses of 'building our way out' of congestion with highways; air pollution and smog; and by far the highest per-capita, transportation-related petroleum consumption in the world. To some, these are just technical problems awaiting an engineering solution—hydrogen-fueled vehicles, say, or advanced technologies that increase highway capacity—and a small price to pay for the freedom and convenience of personal mobility. Others, however, point to more intractable problems of auto dependence: inefficient land use patterns which separate land uses, consume agricultural land, and require long travel distances; social and economic isolation of those who are too young, old, or poor to drive; degradation or decimation of communities from road building and widening projects; and immediate and future harm to the natural environment. A more balanced transportation system, many believe, will result in more efficient, equitable, and environmentally sustainable communities with a higher quality of life.

The increase in automobile travel during the twentieth century came at the expense of two complementary modes: walking and transit travel. Naturally, proponents of a diversified transportation network look to the period before the mid-century automobile boom for solutions. This earlier era, which one might refer to as the 'heyday of transit,' satisfied the mobility needs of urbanites with a combination of dense transit networks and land use patterns that reinforced those networks. In many parts of the world where urbanization has occurred at greater density (due to economic, geographic, or regulatory
considerations), high transit usage is still commonplace. If greater emphasis were placed on transit and transit-supportive land uses in the United States, the theory goes, then Americans too would rely less on private automobiles in their day-to-day travel.

San Juan, Puerto Rico is one city that is testing this theory of transit revival with the construction of a 17-km, $1.75 billion (est.2000) heavy-rail transit system through the heart of a sprawling, traffic-choked metropolitan area. Among the objectives of the projects are reducing automobile congestion, increasing the accessibility and competitiveness of the urban core, and inducing gradual, long-term changes in urban form through the construction of mixed-use, transit-supportive development in the vicinity of Tren Urban stations.

But can Tren Urbano, or the new rail start in any other U.S. city, influence urban form to an extent that measurably reduces automobile usage and justifies the largest public works investment in Puerto Rican history? To do so, the system must prove that it is adaptable and relevant to the travel patterns and habits of modern urbanites, so that it exerts a ‘pull’ which attracts private development to station areas. Furthermore, the traveling public must decide that accessing that development by transit is an attractive alternative to driving (to that development or a substitute somewhere else).

Unfortunately, it may not be possible to look back into history to determine how to encourage this outcome in a modern context. In the heyday of transit, it was the definitive city-shaping technology, pushing the envelope of personal accessibility and dramatically impacting urban form. Today, transit faces stiff competition from the ubiquitous automobile, and in most cases using transit imposes limitations on accessibility in an automobile city, rather than increasing it. This raises questions about the critical mass of transit-oriented development to overcome this accessibility limitation, especially the difficult first transitioning steps in a built-up urban environment.
Moreover, the economic building blocks of cities—offices, manufacturing, housing, institutions, and retailing—have evolved in the half century since the heyday of transit. Spatial and business evolutions, both related to and independent of the ascent of automobiles, have altered the economic and physical landscapes of cities, as well as the lifestyle and travel habits of urban dwellers. Thus it is crucial to consider how fixed-guideway transit and transit-oriented development—ideas reborn from a different era—fit into this new urban environment. Furthermore, as these relationships come to be understood, it is necessary to identify strategies to promote development around transit stations in a manner that encourages transit ridership and reinforces the public investment in constructing the transit system.

1.2.2. Why Study Transit Retailing?

The strongest market and the highest demand for modern transit has been the home-to-work commute, especially to traditional downtowns or central business districts (CBDs). Therefore, the greatest successes in creating transit-oriented development have been in the areas of housing and commercial office space. Yet there are a number of reasons to focus on retail development:

- Transit-accessible retail development is a **vital piece of a truly multi-modal transportation system**. If transit travel and modern retailing are incompatible, then the modern ‘transit metropolis’ will remain elusive;

- Non-work travel is an **increasing cause of urban congestion**. According to the U.S. DOT National Passenger Transportation Survey (1995), non-work shopping and recreational travel accounts for approximately 40% of all person trips. In many areas this has led to severe congestion problems in commercial areas outside of traditional peak hours (e.g., Saturday afternoons).
As commuters' lives become increasingly busy and congestion worsens, travelers are combining multiple tasks on a single excursion from home (i.e., trip-chaining), especially in conjunction with the home-to-work commute. Therefore, if transit is to continue to remain attractive to work commuters, it must also provide opportunities for patrons to combine work and non-work trips in this manner.

Historically, transit systems have had relatively low success in servicing modern retail developments, because of factors such as: low-density and fringe development locations; poor service in off-peak hours when most shopping occurs; the inability of transit to quickly adapt to new development locations, etc. Transit service provided to suburban commercial districts is often used by only by low-wage service workers and carless transit dependents, and not the shoppers themselves.

If transit is to offer a realistic alternative to the automobile for shopping trips, it must afford access to a broad spectrum of retail opportunity, even as these opportunities shift spatially in time. Consumers will eschew transit if they perceive that it curtails their access to retail opportunities. The utility of fixed-rail transit in a contemporary metropolis depends on its ability to provide sustained accessibility in the midst of rapid innovation and reorganization in the urban economy.

1.2.3 Evolution in the Retail Industry

Promoting retail development in transit station areas necessarily requires an understanding of the modern retail industry in general. To do this, one must temporarily step away from transportation considerations and examine the industry in its own right, from the perspective of the retailers, developers, and financiers who ultimately decide where, when, and how to invest their capital to create the built commercial environment.
The industry is illustrative of the many non-transportation decisions which ultimately influence consumers’ travel behavior.

The emergence of superstores, power centers, and entertainment retailing, the financial failure of obsolete retail properties, and the advent of e-commerce are a few of the retail phenomena with dramatic transportation and land use implications in urban environments. The private business decisions undergirding retail development, and the retail developments that result, are both influenced by, and influences on, urban transportation systems and travel demand.

The retail industry has historically reinvented itself with every new innovation that allows greater efficiency or an edge over competitors. As an example with implications for the form of cities, commercial activity has wed itself to the transportation technology that has pushed the envelope of mobility, comfort, and convenience. Each new transportation technology, in parallel with other technological and management innovations, has allowed retailers to revolutionize the industry: improving efficiency to create economies of scale, drawing customers from ever larger trading areas, or increasing the quality and diversity of goods offered for sale to the consuming public.

In the late nineteenth and early twentieth centuries, the heyday of urban rail transit, commercial development gravitated toward streetcar, subway, and railroad lines to capitalize on the visibility and customer streams those that proximity to those facilities provided. Commercial sites in the vicinity of major transit lines were the most lucrative in the city, simply because they were natural focal points of human interaction and economic activity. This pattern of development reinforced both the transit system and the high-density downtown, neighborhood, and suburban commercial centers that grew around stops along these the iron ribbons.
Through the twentieth century, automobile transportation has come to supplant urban mass transportation as the preeminent transportation technology. As urban populations diffused outwards into low-density suburbs, and retailers followed their mobile, affluent clientele. The rise in personal mobility due to the automobile has pushed the commercial frontier to the urban fringe. The new retail nodes of cities have become the highway frontages and freeway interchanges which are as prominent and visible to the automotive shopper as trackside shops had been in the rail era. In most North American cities, the retail outlets offering consumers the greatest variety, the newest innovations, and the best economies of scale are often accessible only by automobile. Predictably, there has been a steady decline in the share of commercial activity occurring in traditional transit-oriented commercial districts, which are often viewed as inconvenient for contemporary shoppers, with physically obsolete structures, and “encumbered” building sites with fractured land ownership, threats of environmental contamination, and low economic potential.

While transportation technology had driven evolutions in the retailing industry, there have been other reasons for the decline of traditional “Main Street” businesses. On the supply side, the most proliferate commercial form of the automobile age, the shopping center, represented a revolutionary means of assembling a controlled retail environment under a single management entity. This arrangement increased the efficiency and profitability of the retail industry, and was perceived by customers as offering advantages in value, convenience, and amenity. Innovations in supply chain management and information technology have allowed store and product lines they carry to grow to sizes that would have simply been too unwieldy a decade ago. Major corporate chains control a larger percentage of retail outlets, and have bargaining leverage or outright ownership of distribution and manufacturing channels, leading to increased standardization in store design and increasing the difficulty of competing as an independent merchant. On the demand side, consumers have developed increasingly sophisticated tastes, led on by megastores offering a staggering array of goods.
In most North American cities today, the retail outlets offering the best consumer values, the greatest variety, and the newest innovations are accessible only by automobiles. The landscape of modern mass retailing is dominated by highway strips, shopping centers, and enclosed malls that are physically and psychologically separated from more traditional, walkable urban cores. Instead of a gradual evolution over a matter of many decades, or even centuries, the landscape of modern automobile retailing can create edge city shopping districts with no discernable center, and which can rise or fall from commercial prominence in less than one decade. These trends pose considerable challenges for the creation of station-area retail development, which requires a strong center (the vicinity of the transit station) which retains its value over long periods of time. Retail solutions from the heyday of transit do not provide a precedent for solving these dilemmas of the modern era.

Of all urban land uses, retail development may be the most challenging to retrofit into a transit-oriented, station-area environment in a manner that capitalizes on its proximity to transit and produces acceptable returns for the retailer and investors. Ideally, transit systems would afford access to the entire spectrum of retail opportunity in a metropolitan area, even as those opportunities shift spatially in time. Consumers are the sovereign agents in the modal choice decision—if they perceive that riding transit curtails their access to desirable retail opportunities, they will that mode of transportation in favor of automobiles.

1.3 A Vision for Transit Retailing

1.3.1. A Definition of ‘Successful’ Transit Retailing

The objective of this research is to determine how public agencies or other stakeholders with an interest in the vitality of transit or transit-served corridors can promote ‘successful’ transit retailing in station areas. However, ‘success’ may be measures by a
number of yardsticks depending on one’s perspective. A project that is a fantastic economic success for the retailer may at the same time be a miserable policy failure if it does not induce a high level of transit ridership among patrons. It may also fail as a community development initiative if the transit development is insensitive or detrimental to community concerns. Similarly, the best-laid policy plans are futile if the retail development is not financially successful for the private investors.

The special nature of station-area retail development requires a more exacting definition of 'success' than the private return on investment. There are also transportation and community development considerations that must be taken into account.

For purposes of this study, a ‘successful’ station-area retail development:

- Is responsive to the economic realities of modern retailing and urban land development, competing in the urban marketplace for consumers and investors on equal footing with automobile-oriented development; and

- Capitalizes on its proximity to transit, with a significant portion of its customer base using the nearby transit facilities to access the available retail opportunities. This increasing the utility and convenience of the transit system for riders, while reducing demand for private automobile travel.

A number of additional good planning practice principles, common to many types of station area development, are applicable as well. For example, the planning, urban design, and development of station areas should link the development to surrounding neighborhoods and commercial districts, becoming a focal point for commercial and civic life in the community. Physical design should create an environment which is amenable
to walking, and which feels safe even in off-peak hours. While it is acknowledged that these elements are as important in the development of transit retailing as most other land uses, they are more general in nature and will not be covered extensively in this research.

The station-area retail development that is needed to create a true transit metropolis must do more than cater to a captive transit customer base by offering newspapers or coffee to commuters. While this concession market is an important aspect of transit retailing (and undoubtedly contributes to some of transit’s existing attractiveness as a commuting option), it does not significantly reduce the demand for automobile-oriented non-work shopping trips. Without attractive retail opportunities in station areas, even the devout weekday transit commuter will have little choice but to use an automobile to accomplish the majority of grocery, discount, specialty, and recreational shopping trips.

Once the Pandora’s box of automobility has been opened in a metropolitan area, it is unclear whether the process can be reverse or altered to create a more multi-modal environment. Even the models of urban development which Americans often hold up as providing a feasible alternative to retail urban sprawl are themselves under siege from the realities of modern retailing. In 1997, for instance, Vienna, Austria received its first American-style outlet mall, and other European countries such as the United Kingdom and France are grappling with hypermarkets and other large-scale, out of town developments. Despite enormously high tariffs and restrictions on automobiles in countries like Singapore and China, there has been explosive growth in the use of this mode at the expense of transit, walking, and bicycling. Once the retail basis of a place has responded to increased automobility through changes in store scale, location, and variety of goods on offer, the dilemma is not longer simply about transportation, but also about lifestyle.

1.3.2 Theories of Transit-Oriented Development
In spite of the daunting challenges, urban planners and transportation professionals are developing theories and techniques to re-shape modern American cities as to increase the viability of transit service. Rail transit systems require a certain development density and concentration of uses to achieve operational efficiency and to offer a reasonable alternative to automobile travel. Origins and destinations must be highly clustered around transit nodes in a walkable, preferably mixed-use environment. Older cities, whose physical form was defined in the pre-automobile era, evolved in this manner by default—convenient access to transit at that time was crucial for the economic vitality of a district. To this day, older American cities have the highest transit modal shares in the country.

More recently, as cities have grappled with the problems of automobile congestion and its attendant problems, rail systems have been built or proposed in newer, lower density environments. Miami, Florida’s heavy rail system is one of the earliest adaptations of heavy-rail transit to a low-density city, as are the East Bay lines of San Francisco’s BART system. Light-rail transit systems have been retrofitted to lower density environments. Planned or built systems in Portland, OR; St. Louis, MO; Calgary, AB, Salt Lake City, UT; and Orlando and Tampa, FL and others traverse low-density urban corridors which do not possess the natural transit-reinforcing characteristics of pre-automotive development. Typically, rail transit stations in low-density areas have a heavy reliance on automobile park-and-ride lots to feed passengers from the surrounding area, since neither pedestrian travel nor bus service can effectively feed the trunk line. As a result of the disconnect between the needs of transit and the existing urban form, transit performance in many of these systems have been lackluster, save peak-hour work commutes to and from CBDs.

In the last 10 or 15 years, an ambitious urban planning and architectural movement has emerged, seeking to re-create the patterns of older American cities in what today are low-density urban environments. Known alternately as ‘New Urbanism,’ ‘Neo-Traditional
Development,' or ‘Transit-Oriented Development,’ the design theory emphasizes the transportation, environmental, and social benefits of traditional American town planning before the great suburban migration of the latter twentieth century. While allegiances to the social and architectural aspect elements of the school vary, the principles of densification and pedestrian accessibility have resonated with transit professionals who recognize its relevance for retrofitting fixed-guideway transit into lower-density urban areas.

Principles of transit-oriented development of one stripe or another are appearing in transportation plans and community visioning documents throughout North America, particularly in conjunction with new transit starts. Transit projects are increasingly viewed as more than simple transportation facilities—rather, there are rare opportunities to wean American cities away from their automobile dependence, putting into practice long-acknowledged relationships between land use, urban form, and transportation behavior. In a more practical sense, it is becoming more and more important to actively intervene in land use planning as high-capacity transit facilities are introduced into low-density urban environments.

Transit-oriented development reinforces transit investments in a number of ways. First, an increase in the density of dwelling units creates a large transit constituency within a short walk, bike ride, or bus ride of a trunk-line transit station. Second, a commercial core in the immediate vicinity of the transit station provides shopping and services, within easy reach of transit passengers. This also facilitates “trip-chaining” of errands during a transit-based journey, especially when passengers are transferring between modes (rail, bus, bicycle, foot). This adds to the attractiveness of transit travel vis-à-vis automobile travel, through which trip chaining is achieved very easily.

Furthermore, station-area development strengthens the ties between the transit station and the surrounding community. Station-area development can, if skillfully executed, create
Chapter One
Introduction: Retailing, Transit and Urban Form

a point of identity within a community, sometimes where none had existed before. This raises the profile of transit within the community and can make a transit station the focal point of a neighborhood. The convenience and attractiveness of rail transit is improved if the station is in the “middle of the action,” where travelers want to be. Creating development around the station that enforces this image and enhances the accessibility of the station from surrounding areas reinforces the station area as a destination and as a community amenity.

On a regional scale, the transit-oriented metropolis would consist of development nodes containing mixtures of employment, retail, and residential uses in walkable clusters as described above. This regional architecture facilitates transit travel by bringing a large number of origin and destination points within easy access of transit in a manner that is impossible in sprawling, use-segregated development patterns. In a truly transit-accessible metropolis, a passenger would not feel segregated from economic or cultural opportunities if he or she relied primarily on transit as a mode of travel. Furthermore, transit-oriented development is intended to advance a number of social equity objectives, such as bringing low-income workers within access to jobs, and providing maximum mobility to the young, the elderly, and the carless.

1.3.3. Theories of Transit-Oriented Retailing

Architect and urbanist Peter Calthorpe and his colleagues have proposed the creation of mixed-use commercial centers at the heart of any station-area development. Commercial uses form a core around the transit station, with high- and medium-density residential uses surrounding this core. According to Calthorpe, “Sufficient retail and commercial space must be provided to form a useful shopping center and create opportunities for residents and employees to run errands during lunch-time or while traveling to and from work. Without shopping opportunities, residents and workers will use their cars for more
trips and will lose and incentive to use transit." In other words, the juxtaposition of mixed land uses, all within convenient access of transit, will increase both the frequency and variety of trips taken by transit, and allow for convenient trip-chaining via transit.

The physical size of commercial cores in transit-oriented developments varies according to the needs of the surrounding development and the region. Calthorpe proposes a hierarchy of retail typologies based on the size of the surrounding market needs: “convenience centers” (10,000-25,000 sq. ft. of retail); followed by “neighborhood centers with a supermarket, drugstore, and other uses,” (80,000 to 140,000 sq. ft.); “specialty retail centers,” (60,000 to 120,000 sq. ft., but occurring in smaller numbers); and “community centers with convenience shopping and department stores” (120,000 sq. ft. or more).

Physical design of these commercial cores reinforces their pedestrian nature through streetscape elements, connectedness of streets and paths, building density, and activity mix. Parking, when provided, is behind or to the side of commercial buildings so as not to interfere with the walkable character of the street. Such commercial districts are accessible by automobile as well, but the provisions for automobile travel are not dominant and do not preclude other modes of access.

Building a transit-accessible metropolis implies that much of residents’ routine, specialty, and entertainment shopping travel shall be feasible, convenient and appealing to choice riders using transit. It is presently an open question whether the contemporary retail industry, and the contemporary retail shopper it has created, can be adapted to a more transit-oriented model of urban living. Achieving such an ideal requires an understanding of the nature of shopping travel demand, but also an understanding of the land use development choices and business pressures on retailers and retail developers. For all of

---

these groups, on both the supply and demand side, transportation considerations are just one of many factors in a complex chain of decisions.

1.4 Research Objectives and Methodology

1.4.1. Research Objectives

The principle objectives of this research are as follows:

- **Determine the major industry transformations that have occurred in the retailing and retail development** since the heyday of transit in the early twentieth century. (Chapters Two and Three);

- **Determine the implications of these transformations for transit retailing** in contemporary American cities, (Chapter Four);

- **Identify projects and techniques to promote transit retailing** that public agencies have used in cities throughout North America (Chapter Five).

The above findings will be applied to the **Tren Urbano** context with these objectives:

- **Determine the relationship of the Phase I alignment to the existing retail landscape of San Juan**, and the degree of interaction of Tren Urbano with existing shopping travel behaviors (Chapters Six and Seven);

- **Identify opportunities for and limitations of transit retail development in Tren Urbano station areas**, given system and station characteristics, policy
and institutional factors, and retail market conditions (Chapters Seven and Eight); and

- Propose a transit retailing implementation strategy that can form part of the on-going comprehensive station area planning process (Chapter Nine).

1.4.2. Research Approach

This research will make a deliberate attempt to consider the perspectives of private-sector retailers and developers in the station-area development process. The ultimate success of transit retailing depends on the willingness of these investors to choose station-area retail sites over others. In order for this to occur, station-area parcels must be planned and designed in a way that facilitates commercial success, in addition to fulfilling the transportation and social objectives that are also involved. By focusing first on private-sector retail trends and development criteria, this study will try to demonstrate that transportation access—the overriding focus of transit planners promoting station-area development—is only one of a plethora of competitive and risk allocation decisions which retail firms must grapple with to maintain their market viability.

For transit retailing to be viable, it must be responsive to the overall competitive needs of the retail industry. A clearer understanding of the interactions between transit systems and private retail development will lead to more informed transportation and land use policies, as well as built projects that reflect the transportation and community ideals of transit-oriented development without compromising their economic competitiveness.

Much discussion and research about transit-oriented development has focused on its social benefits, such as reduced automobile use and pollution, or increasing the mobility of the young and old. The perspective that is lost is that of the private-sector investor and developer, whose capital and reputation is ultimately at risk, and who ultimately construct
most of the build environment. Retailers and developers, in turn, are responsive to market signals of consumers. It is necessary to ask whether the modern retailing industry is compatible with transit-oriented development and transit retailing principles and needs.

This thesis is an attempt to identify the myriad factors that can complicate or preclude the development of “successful” station-area retail projects, including trends in the retail industry, consumer shopping (and travel) behavior, critical phases in the retail development and approval process, and important physical design issues. Some of these factors are amenable to acute solutions such as better communication between the public and private sectors, streamlined approval processes, etc. Others may require implementation of as yet untried or unknown solutions, while still others represent larger social, economic, or technological trends to which both parties must simply adapt.

1.4.3. Research Methodology

One of the primary intentions if this work is to draw insights on transit retailing from outsiders the traditional boundaries of transit scholarship. This is partially because of the scarcity of formal academic work in this particular field, and the pragmatic nature of the material. This approach allows one to more readily identify practical methods and solutions in use among practitioners right now in this budding area of planning practice. Furthermore, the insights of practitioners are of particular value to the implementers of Tren Urbano’s station developments. However, more conventional sources of planning scholarship have also been drawn upon to provide a foundation on which to build this research and to provide background information and insights. Knowledge and resources have been drawn from a diversity of fields, including: transportation engineering and planning; urban planning; urban design and architecture; retail geography; real estate development and finance; law; political science; and marketing.
In order to realize the potential of station-area retail development, it is necessary to first understand the nature of the retail industry, and the underlying competitive, economic, social, technological, and physical factors that underlay retail location decisions. In addition, it is necessary to understand, from the perspective of the private-sector retailer, land developer, and investor, the timing constraints and economic pressures involved in the retail land development process. With this basis, it is then possible to compare the public policy objectives (transportation, social, economic development, urban design, etc.) of the transit-oriented development model with the pragmatic realities of retail land development. Out of this comparison, conflicts between the objectives and constraints of the public and private sectors will emerge. This provides a lens for examining the development experiences of cities across North America, to identify potential strategies for reducing or resolving development conflicts. These general experiences can then be applied to the specific context of the Tren Urbano project and the economic, political, institutional, legal, and spatial characteristics of the San Juan, Puerto Rico.

1.5. The Tren Urbano Context

This research will utilize the Tren Urbano heavy rail system in San Juan, to examine the feasibility of implementing a transit retail development program in a low-density city. The San Juan Metropolitan Area (SJMA) is a city which has evolved with low density, automobile-oriented patterns during its explosive growth since World War II. Currently, the first 17-kilometer phase of Tren Urbano (Figure 1-1) is under construction, scheduled to open in 2002. The project is intended to provide some relief to the chronic automobile congestion plaguing the region.

At present, much of the Tren Urbano Phase I corridor lacks the density necessary to support a heavy-rail transit system. This implies that the rail line will be heavily reliant on feeder services (buses, public shared vans, or taxis) and automobile park-and-ride lots in the short term. In the longer term, however, it is hoped that Tren Urbano will provide
the catalyst to densify the core of the SJMA through new growth in transit-oriented nodes around Tren Urbano stations.

As with any built-up city, San Juan has an established web of retail establishments, large and small, throughout the city. The newest developments cater almost exclusively to patrons arriving by automobile, and greenfield developments along highway corridor have witnessed the greatest growth in the past several years. The impact of Tren Urbano on the retail economy cannot be determined until after the system is up and running; however, there are a number of intriguing station-area locations which could possibly accommodate new transit-oriented retail development, reinforcing the burgeoning transit ridership base. Retail development opportunities range from underutilized urban commercial centers to suburban greenfield parcels to neighborhood brownfield sites. To date there has not been a comprehensive analysis of these various retail opportunities.

The station area planning and development program for Tren Urbano is currently in its infancy, and the efforts undertaken at this stage could have a dramatic effect the ability of Tren Urbano to fulfill its long-term planning objectives. Accomplishing long-term land use transformations will require concerted planning efforts, including joint public-private land development of station-area land parcels, station-area master planning, the creation of zoning overlay districts around station areas, and other policies to direct growth toward station areas and guide the physical form and mixture of uses within those areas. The SJMA has an existing pattern of retail development, existing bodies of planning laws and jurisdictions, a development community used to a particular way of business, limited public resources, and limited control over the structure of land development. All of these factors must be taken into account in assessing the impact of this transit investment in the urban environment and the retail landscape.
Figure 1-1. Tren Urbano Phase I and IA Alignment
Chapter One

Introduction: Retailing, Transit and Urban Form

The urban characteristics and planning environment of San Juan provide a challenging environment for this ambitious project. It is hoped that the application of the general findings of Part I of this document to Tren Urbano will contribute to the understanding of the retail potential of the transit system and the development of a comprehensive station-area development plan.

1.6 Organization of this Document

Figure 1-2 shows the organization of this document. There are ten chapters divided into two Parts, I and II. Part I, Transit in the Contemporary Retail Environment, provides a general overview of transit retailing. The next two chapters focus on the retail industry and general, forming a basis with which to examine the competitiveness of transit retailing. Chapter Two, Retail Evolution, Competition, and Location, looks at trends in the retail industry that have transformed and influenced its competitive and physical landscape since the heyday of public transit. Chapter Three, The Practice of Retail Development, provides an introduction to the way in which contemporary retail projects are conceived, financed, and constructed.

Chapters Four and Five apply these general findings about the retail industry to transit retailing in particular. Chapter Four, Implications of Retail Evolution for Transit Retailing, evaluates the opportunities and obstacles of station-area retailing relative to broader trends in the retail industry. Chapter Five, Promoting Transit Retailing, highlights some of the strategies and techniques that planners have used to promote retail development in non-traditional, transit-oriented locations.
Figure 1-2. Organization of this Document.
Part II applies the insights of Part I to the specific case of Tren Urbano in San Juan, Puerto Rico. Chapter Six, *An Overview of Transit and Retailing in San Juan*, introduces the city, the transit system, and the retail landscape of the San Juan Metropolitan Region. Chapter Seven, *The Retail Potential of Tren Urbano*, looks at the potential influence of Tren Urbano Phase I on the retail environment in the city, including the development potential of station areas. Chapter Eight, *Institutional and Policy Context of Tren Urbano*, examines policy and institutional considerations in creating and mobilizing a transit retailing initiative for Tren Urbano. Chapter Nine, *A Transit Retail Development Strategy for Tren Urbano*, suggests an implementation strategy for fulfilling the commercial potential of the system, based on the principles, opportunities, and constraints identified in previous chapters. Chapter Ten, *Conclusion: Prospects for Transit Retailing*, summarizes and reflects on the findings of this study, and identifies opportunities for future research.

Appendix A examines retail supportive physical design considerations in greater detail. Appendix B provides sample development informational materials used by public agencies to promote development in non-traditional or TOD locations. Appendix C is a detailed station-by-station retail analysis of Tren Urbano station areas, supporting the analysis of Chapter Seven.
Chapter Two
Retail Evolution, Competition, and Location

2.1. Introduction

A successful transit retailing strategy is built on an understanding of the objectives and competitive constraints retail firms and development firms it is designed to attract. This will help to identify both the strengths and deficiencies of transit-supportive development relative to contemporary organization of the industry. Too often the viewpoint of the private investor is not taken into consideration in transit investments, leading to station-area development environments that would be too expensive, risky, or uncompetitive to woo development away from conventional auto-oriented locations. Whatever the public benefits transit-oriented development may offer, it will not create a viable neighborhood centers or alternatives to automobile dependence if it cannot leverage the investment of private enterprise.

Retailing in the United States is a very big business, accounting for over $2.3 trillion in annual sales.\(^1\) Historically, ‘retailing’ was the last step in the distribution chain of material goods before they reached household consumers, but this definition no longer tells the entire story. There are now strong links between the sale of goods and the provision of services, even at the level of individual products. (e.g., prepared foods at supermarkets which combine the sale of food with its actual preparation). The largest providers of basic goods in this industry are very large indeed—the Wal-Mart chain accounted for 7% of all retail sales in 1997.\(^2\)

---

\(^1\) Management Horizons Corp., 1999.
In addition, many consumers in the American 'consumer society' view shopping as not only a means to acquire goods, but also as a form of entertainment. While in the heyday of downtown commerce 'window shopping' and the glitter and glamour of department stores clearly had entertainment value, these links have become more explicit in the past decade. The emergence of 'shoppertainment' centers with arcades, restaurants, and theatres, is a response to increasing consumer leisure and discretionary income. A Starbucks executive, half-joking about the firm's desire to become American's 'third place' away from work and home, awaits the day that a peace treaty is signed at a Starbucks's coffee shop.³

In short, the retail environment of today is very different from that which existed in the heyday of transit in the early twentieth century. Therefore, a simple-minded reversion to the retail formats of the transit era, in the hopes of promoting transit-focused lifestyles, will necessarily suit contemporary retailers or consumers. In preparation for a more detailed discussion of the relationship of retailing and transit in the following chapters, this chapter will examine the characteristics of the retail sector today, and the forces and evolutions that brought it to where it is now.

This chapter provides an overview of the contemporary retail industry, with particular emphasis on the transformations that have shaped the industry since the heyday of transit. It begins with an examination of how innovations and technological change can swiftly transform the industry, including the impact of the automobile. Next, this chapter explores the organization of the retail industry today, including market segments, ownership, and dominant retail formats. Next, the discussion turns to spatial dimensions of retail competition in contemporary decisions, including the impact of transportation on location decisions and characteristic geographic phenomena of low-density metropolitan areas.

2.2. Evolution in Retailing

Retailing is one the most volatile sectors of the urban economy, driven by innovations and fashions, the rise and fall of industry leaders, and shifting patterns of spatial organization. Retailing is both led by, and a leader of, demand-side lifestyle changes and transformations in how, when, and for what purposes consumers shop. In 1900 the majority of dollars spent on consumer retailing were for everyday commodities and necessities. As the wealth of the United States has grown, so did the distribution of discretionary and luxury goods, such as fashionable clothing, leisure goods, and appliances. Presently, there is enormous growth in convenience services such as prepared foods, grocery delivery, and errand services, catering to the needs of time-pressed professionals. Further transformations undoubtedly lie just beyond the foreseeable future.

As a highly competitive industry, the retail landscape is peppered with both booming successes and the papered-over windows of failed businesses and obsolete commercial structures. Change is the only constant in retailing, and the rate of change has accelerated in the present age of high personal (auto)mobility, the consolidation of basic goods distributors into a handful of large entities, changing lifestyles of consumers, and innovations in information technology and the management of retail firms. To stand still in retailing is to go backwards.

In general, the processes of innovation and evolution in the contemporary economy are occurring more rapidly than ever. Retailing is an exemplary example of this state of 'hypercompetition.' According to one definition, hypercompetition is

...characterized by a constantly escalating rivalry in the form of rapid product innovation, shortened design and product life-cycles, aggressive price- and competence-based competition, and experimentation with new approached to serving customer needs...Hypercompetitors engage in and
Innovation has thus always played a major role in retailing, as it was essential for retailers to maintain or grow their market share. Common fixtures of modern retailing such as the shopping cart and the UPC bar code revolutionized the industry when they first emerged. Catalog retailers of the late 19th century took advantage of new efficiencies in the railroad and postal services to expand access to goods, and the catalogs of Sears and Montgomery Wards often provided the only reading material in a rural household. Shopping centers were a response to suburbanization, but also pioneered important innovations in holistic management of a shopping 'district.'

Figure 2-1. Porter’s Model of a Competitive Industry (1985).

Both internal and external forces impact the retail industry. The competitive framework of Porter is a useful framework for understanding motivations for innovation and

---

evolution in the industry. As shown in Figure 2-1, competitive pressures can be exerted from five sources: 1.) bargaining power of customers; 2.) bargaining power of suppliers; 3.) rivalry among existing competitors; 4.) the threat of new entrants; and 5.) the threat of substitute products.

1.) Bargaining Power of Customers: The most important force in retailing is the bargaining power of consumers. The saying that ‘the customer is always right’ is a realization that consumers hold a great deal of sovereignty, even if there is only one other competitor to whom they can turn. The increase in consumer mobility due to the automobile has helped to increase consumer power by bringing distant competitors even several towns away within their reach. The industry devotes enormous resources to researching, analyzing, anticipating, and marketing toward consumer preferences. Identifying methods of improving a retailer’s attractiveness to consumers, e.g., building stores with wider aisles or more convenient parking, reducing overhead costs, or creating a desirable image compel retailers to find new and improved means of doing business.

2.) Bargaining Power of Suppliers: Interactions between retailers and suppliers have long been important in retailing. Suppliers and retailers may enter into contractual agreements specifying the amount of shelf or floor space to be devoted to a particular product, or suppliers may provide accessories and fixtures (e.g., coolers and display stands) to improve the display of their products. Generally, however, the limitations of shelf space and the desire of retailers to only stock the best-selling products have placed retailers at an advantage. In any case, retailers can just add on a mark-up to the price of goods that are simply being distributed through retail stores. Wal-Mart Corporation was a pioneer in vertical integration between retail stores, distributors, and even manufacturers, and can use its huge market share to command deep discounts and even customized products from its suppliers. Gaining a dominant market share, and thus buying power over suppliers, through physical expansion and multiplication of stores is form of competitive advantage.

---

3.) **Rivalry Among Existing Firms:** The competition for market share among existing retailers is the most obvious driver of competition. Each firm seeks to maximize its own market share, and competes with other firms through price, product differentiation, specialization, consolidation, expansion, relocation, marketing, and myriad other methods to expand market share. Staying one step ahead of competitors (or catching up with necessary) is critical to long-term survival in the industry.

4.) **Threat of New Entrants:** Existing retail firms are constantly under threat of new entrants offering a superior product or service that will erode their market share. Often retailers using a new technology or management format can revolutionize a market segment, compelling existing firms to catch up or go out of business. Examples include the impact of superstores in books, home improvements, or discount merchandise on independent booksellers, smaller hardware stores, or five-and-dime stores.

5.) **Threat of Substitute Products:** Retailers may also fall victim to eroding markets, cyclical sales, or changes in consumer taste or lifestyle from substitute products or services. The emergence of Internet retailing has made some retailers anxious their role in the future marketplace, and the technology is having a dramatic impact in some industries already. For example, automobile retailers are finding themselves squeezed out of the product delivery chain due to the direct Internet sales from automobile manufacturers. The rise of superstores and entertainment retail centers are squeezing the market share of traditional enclosed malls, whose role as a provider of basic goods has been diminished, and who are losing their role as ‘hang-outs’ and entertainment destinations.

### 2.3. Automobile Impacts on Retail Evolution

It is well established that transportation technologies can have a dramatic impact on urban form. Accompanying these changes in physical form have been evolutions in the
retail industry which take advantage of the accessibility and mobility advantages of new transportation technologies. For example, the development of streetcars in the 19th century, and the subsequent increases in urban scale, permitted the agglomeration economies of the first department stores in central business districts, by expanding the market size and the geographic reach of a single store. Less immediately apparent has been the development of motor trucks to that have permitted advancements in inventory management and distribution systems. Transportation improvements helped to break the 'village tyranny' of monopolistic pricing that small neighborhood and village merchants once held over their customers.7

The rise of automobile ownership and usage in the mid-twentieth century is arguably the single most important factor influencing the evolution of modern retailing.8 The reason is simple: the size and competitiveness of retail markets is a function of size, and greater mobility gives consumer access to larger selections and more competitive prices. A larger number of goods can be purchased at a single time, and the travel time required to complete the trip is minimized.

Handy provides an analysis of the growth in importance of the automobile for retailing during the twentieth century.9 Before the rise of the automobile, the reach of retail firms or consumers was restricted to a reasonable walking distance say, (approximately one-half mile or a ten-minute walk) or transit distance (2-3 miles). Higher-order goods such as fancy clothes and appliances were sold only at the most accessible location, the central business district. In 1920, 90 percent of general retail sales occurred in central business districts.10 As cities enlarged in size, Proudfoot found in 1937 that CBDs has a smaller proportion of overall sales (37 percent in Philadelphia), with substantial amounts also occurring within walking distance in neighborhoods (40 percent).

7 ibid.
8 The impacts of the automobile on the urban economy and society are well documented from a variety of perspectives. See Kenneth T. Jackson, The Crabgrass Frontier (1985).
9 Handy (1996).
With the emergence of the automobile, the shopping range of consumers could range from one-half mile to 20 miles or more, depending on the type of merchandise or service, without the former constraints of rail lines or points of high centralization. In fact, centralized locations were often more of a liability for large retailers, because the congestion and restraints on parking created inconveniences for customers, who could simply shop elsewhere. As populations migrated to the suburbs, it was logical for basic services, and eventually higher-order goods as well, to also be sold close to the suburban residential concentrations. From the 1920s, shopping strips emerged on major urban avenues with more convenience parking than the CBDs. Planned shopping centers began to proliferate in earnest in the 1950s, becoming "the first commercial building type which really takes into account the Americans' use of their automobiles as part of their everyday living habits."¹¹

These changes in transportation access can be illustrated in the spatial demand curve for retailing. This is a plot of retail purchases versus the distance of consumers from the store. As Figure 2-2 shows, this curve has been flattening over the course of the twentieth century, indicating that consumers are traveling further and further distances to access retail goods.

![Retail Spatial Demand Curve](image)

**Figure 2-2. Retail Spatial Demand Curve (Jones 1990).**

---

¹⁰ Hoyt (1968).
¹¹ McKeever (1957).
While consumers are in general traveling longer distances to reach retail centers, they have access to a far broader range of goods than in previous eras. With the ability to draw customers from a larger ‘trading areas,’ supermarkets, discounters, and specialty stores can provide a broader range of merchandise (e.g., Home Depot vs. neighborhood hardware stores) or cater to a more specific consumer tastes (e.g., the proliferation of specialty woodworking supply or collectables stores). Often large retailers can deliver this increased variety at considerable savings as well, due to economies of scale and other business efficiencies. With more choices and more disposable income, consumers have developed more specialized tastes in merchandise and services, reinforcing the specialization of the industry.

This in turn has helped to redefine the meaning of ‘basic goods’ to include a much broader selection of merchandise, procured in larger quantities, than in previous eras. In 1953, the average new supermarket was 13,600 square feet; in 1987, it was 46,892 square feet. Today’s grocery superstores can exceed 100,000 square feet. During this period, grocers first added in-store delis and bakeries, then florists, photo developing, pharmacies, bank branches, housewares, prepared food counters, juice counters, sushi bars, and other complementary sales features.

In addition, the range of goods on offer has expanded; it is not uncommon for a grocery store to stock close to 300 varieties of fruits and vegetables. This is driven both by increasing consumer demands for variety, as well as shipping and packaging innovations that allow produce to be brought from around the globe rapidly and cost-effectively. As a result, ‘neighborhood’ grocery stores often combine many of the business functions of an old neighborhood business district, but draw on a much larger geographic area to support the broad range of goods. The larger stores can also offer other conveniences to consumers such as late-night or even 24-hour operation (apropos for increasingly-busy individuals) and volume buying power. Supply-side efficiencies in management,
advertising, and inventory control enable lower costs with which small-scale independent grocers cannot compete. These smaller merchants have had to either exploit specialty niches (underserved areas, high quality service or unique merchandise, ambiance, etc.) or have been forced to fold.

Efficiencies of scale and innovations in distribution and inventory management have caused many sectors to consolidate into a few very large corporate chains. Pharmacies are a prime example of this phenomenon, with national firms like CVS, Eckerd, and Walgreen’s expanding rapidly and absorbing smaller, less efficient chains and independents. (And, at the same time, expanding their merchandise lines to include both pharmacy and convenience grocery goods, opening small drive-through pharmacies, etc.) Aside from having increased purchasing power over suppliers, these larger chains benefit from efficiencies of scale in advertising, formula store development, and lower operational overheads. Larger firms also have the resources to pioneer and implement new management and technology solutions. These large companies have also become more vertically integrated, controlling their own distribution networks and sometimes even the production of products they sell.

For many years, the retailing industry had a reputation as an information technology backwater. Wal-Mart was a leader in introducing and perfecting the use of information technology to for efficient management of large-scale retail stores and distribution chains. This translated into a price advantage that Wal-Mart passed on to its consumers, decimating smaller competitors and squeezing the profit margins of the few large firms which can compete with the company.

2.4. Contemporary Retail Organization

Chain stores and mass-market retailers, owned by corporations and sometimes operated by franchisees, increasingly dominate retail activity. Chain drug stores control 80% of that market, up from 35 percent in 1987. Chain booksellers and internet retailers have
83% of their market, and Home Depot and Lowes alone control 30% of the home improvement market. Five firms control on-third of retail grocery sales. Blockbuster and Hollywood Video control 43% of home video rentals. In many of these sectors, smaller or regional chains take even more market share away from independents.13

Figure 2-3 is a schematic view of contemporary trends in the retail sector. The dawn of the ‘new economy,’ the increasing wealth and increasing time pressures of Americans, and boredom with conventional retail formats have shepherded a reorganization of the retail sector over the past decade. The industry is evolving into three subcategories: 1.) Value-Oriented Retailing, focused on the efficient distribution of everyday commodity goods; 2.) Entertainment-Oriented Retailing, merging retailing and conventional entertainment interests; and 3.) Niche Retailing, a diverse set of businesses that serve distinct and specialized markets or tastes not captured by mainstream retail firms.

1.) **Value-Oriented Retailing** is associated with the mass merchandising of everyday items (commodities), in which consumers generally seek a high degree of value. Examples products include groceries, toiletries, common household goods, basic clothing items, name brand electronics, etc. Value-oriented retailers are most successful marketing goods that consumers purchase out of necessity or as modest luxuries, rather than for the entertainment value of the shopping experience. In a culture that places great emphasis on material acquisition for status and comfort, value-oriented retailers win with consumers because they allow the average person to acquire greater quantities of goods for a given quantity of resources. Because of the prevalence of brand names in retailing, the consumer can easily see that large value-oriented retailers can offer an identical product as another retailer at a lower price.

---

13 Institute for Local Self-Reliance (1999).
Figure 2-2. Major Evolutionary Trends in Contemporary Retailing
Large value-oriented retailers achieve their competitive advantage (i.e., offering a vast selection of more or less standardized goods at the lowest prices) with very efficient distribution networks and market buying power over distributors. Information technology innovations (the UPC code, computerized inventory tracking, etc.) and management innovations (the emergence of the chain store, lengthened operating hours, etc.) have allowed greater levels of efficiency among value-oriented retailers.

Consumer acceptance of value-oriented retailing for commodity items had remained strong even as national per-capita incomes have risen, which one might associate with decreasing emphasis on value in retailing. Rather, the success and advertising mantras of value-oriented giants such as Wal-Mart have taught consumers that it isn’t necessary to pay higher prices for basic goods, which has dissipated many of the pejorative connotations of “discount” retailing. Rather, as incomes rise, more discretionary spending has occurred in pursuing leisure and recreational shopping, leading to the second emphasis of contemporary retailing.\(^{14}\)

2.) **Entertainment-Oriented Retailing** combines conventional retailing and entertainment interests, producing a new leisure industry that sells experience and ambiance as well as discretionary merchandise. There is evidence that consumers have grown bored with conventional retailing (e.g., hanging out at shopping malls) as a leisure activity, so retailers are seeking attractions with more pizzazz. Hollywood set designers create ‘there restaurants’ such as Rainforest Café, and outdoor retailers provide artificial whitewater for consumers to test (and hopefully, buy) their kayaks. Firms with roots in the entertainment industry (e.g., Disney, Warner Brothers) tend to be strong in this area by capitalizing on their name recognition. As shopping becomes more of a leisure activity, it must compete with other leisure activities and thus become more enjoyable for the consumer. Megaplexes of 20 screens or more can act as the anchor of an entertainment retail complex just as a department store anchors a traditional mall. Entertainment retailing can include sophisticated development and design teams,

\(^{14}\) Tompkins (1999).
including Hollywood set designers and other entertainment professionals. In addition, some retailers have seized upon entertainment-oriented uses to ensure that other commercial project remain active into the evening, ensuring the highest return on assets. While anchors such as theatres may pay 15 times less per square foot than some other conventional retailers, the large proportion of high-rent restaurants in such projects can make up the difference.\(^{15}\)

3.) **Niche Retailers.** While the preceding category includes the majority of U.S. retail sales, thousands and thousands of niche retailers (including many smaller and independent firms) do not fit into either category. Niche retailers have a target market, ownership structure, physical location, merchandise lines, ambiance, etc., that is not catered to by conventional mass marketers. Niche retailers contribute to the almost infinite variety in the retailing industry.

In the presence of major mass retailers, many small or independent businesses survive because they serve a niche market, such as a geographically underserved area (e.g., small urban neighborhood) or provide unique amenities not provided by mass marketers (such as personalized customer attention, local color, etc.). Furthermore, because shopping in American culture is often as much an act of self expression as it is about acquiring needed goods, and a wide variety of retailers has emerged to cater to a diverse spectrum of “non-average” personal tastes—luxury markets, alternative lifestyles, or hobbies or special interest. In some cases, the very appeal of bucking the mass-marketing trend is a source of customer satisfaction with niche retailers. Niches may also exist temporally, such as when a more appealing competitor has not yet entered a retailer’s niche market.

Independent retailers have suffered at the hands of mass merchandisers because of economics, but also because of a lack of marketing and management sophistication that makes larger chains more savvy and effective. Robert Gibbs, a national retail consultant, claims that smaller retailers can increase their business by 20 to 30 percent with a few

\(^{15}\) Cohen (1998).
simple changes, including the way items are displayed, hours of operation, lighting, simple price comparisons with competing stores, and placement of items in the store. According to Gibbs, smaller retailers can thrive in niche markets, especially by providing an environment which feels more “authentic” than national chains, which is a major drawing point for aging baby-boomers. However, smaller retailers must learn to adapt to the convenience innovations and standards the consumers have learned to expect.16

New trends are often incubated in the niche retail sector, beginning as grass-roots or local lifestyle phenomena that become wildly successful. Chain retailers sometimes assimilate into chain-store strategies. Examples include the migration of natural foods and organic produce from specialty niches such as co-ops to the average supermarket, or the national chain store rebirth of the coffeehouse, based on their success as a lifestyle concept in trend-setting and intellectual neighborhoods.

2.5. Dominant Retail Formats

The economics of modern retailing have given rise to a few dominant retail formats in general merchandising. Table 2-1 shows the market shares of mass-retailing formats. Notice that the fastest-growing market share is for power centers and superstores. According to the International Council of Shopping Centers, 55% of all new stores in the United States were superstores. In 1994, that percentage rose to 80%.17 Regional malls are the most significant losers in market share, whose traditional markets are being squeezed by both superstores and entertainment retailers.

---

### Table 2-1. Mass Retail Distribution by Market Share (ERA Associates 1998).

<table>
<thead>
<tr>
<th>Retail Format</th>
<th>1990</th>
<th>1998</th>
<th>2000 (est.)</th>
<th>2005 (est.)</th>
<th>2010 (est.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Mall</td>
<td>30%</td>
<td>25%</td>
<td>21%</td>
<td>19%</td>
<td>18%</td>
</tr>
<tr>
<td>Super-Regional Mall</td>
<td>15%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Power Centers (Superstores)</td>
<td>20%</td>
<td>21%</td>
<td>26%</td>
<td>27%</td>
<td>28%</td>
</tr>
<tr>
<td>Membership and Warehouse Stores</td>
<td>7%</td>
<td>10%</td>
<td>9%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Factory Outlets</td>
<td>5%</td>
<td>6%</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Other/Freestanding</td>
<td>16%</td>
<td>14%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Catalog/TV</td>
<td>7%</td>
<td>8%</td>
<td>7%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Internet Retail</td>
<td>--</td>
<td>--</td>
<td>4%</td>
<td>8%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Excludes Supermarkets, Chain Drug, Automotive, and Building Materials

#### 2.6. Adaptation in the Face of Competition

With the rapid changes in retail formats and customer preferences, retail property owners are forced to continuously adjust their marketing strategies to meet changing conditions. For example, most major properties require a facelift and/or expansion approximately every 10 years in order to retain a fresh, up-to-date look and to catch up to retail trends.

The Plaza Las American shopping mall in San Juan, the largest shopping mall in the Caribbean is a prime example of this phenomenon. Built in the 1960s with traditional regional mall anchors and minor tenants, the center became increasingly strained with the influx of superstore retailers on the island in the 1980s and 1990s. Rather than lose market share and wither, the management of the center undertook an ambitious renovation and expansion program, adding over 100 stores and a new Macy's department store as a tenant. To adapt to greater demands for leisure retailing, the Plaza added a movie cineplex, a food court, and changed its tenant mix to include more discretionary merchants, rather than sellers of basic merchandise. Fortunately for the management, the Plaza had plenty of unutilized land on which to expand, and To retain a share of mass-marketing revenues being siphoned by superstores, Plaza Las Americas added a large
supermarket, a Toys ‘r’ Us, and a Big K-Mart on out-parcel land behind the store. In more traditional, unmanaged retail districts, the foresight or resolve to take on such radical changes to preserve market share is often lacking or difficult to mobilize before it is too late.

2.7. Future Evolutions in Retailing

An enormous amount of effort in the retail industry goes into predicting the next big thing.' While no one ever knows this for sure, two trends have caught the attention of the industry: Internet retailing and Urban retailing.

2.7.1. Internet Retailing

The emergence of the World Wide Web is predicted to bring revolutionary changes to many aspects of modern communication, business, and society. A continual stream of new and innovative ideas are introduced, without certainty for which will succeed and fail. One of the most active areas of Internet development has been Internet Retailing, or e-commerce.

Predictions about the impact of e-commerce vary widely from almost nothing to a total obsolescence of conventional ‘bricks-and-mortar’ stores. While the real impact will likely fall somewhere in between the two extremes, retailers are sitting up and paying attention. After the initial success of online retailers like bookseller Amazon.com, many conventional retailers have established an online presence as well.

In terms of transportation and urban development, the pertinent question is to what extent e-commerce will replace trips to conventional retailers. Many commodity goods, such as books and CDs have proven very successful online, yet traditional bookstores remain viable as shopping and leisure destinations. Other more mundane services offer delivery of grocery and drugstore items, among others, and in Singapore home delivery lockers to
receive such items are already commonplace in apartment buildings. It is possible, but uncertain, that the superstore will be supplanted by vast, anonymous warehouses offering home delivery of items purchased online. With bulk commodities digitized, retailing could focus even more on entertainment, experiential, and discretionary markets, with dramatic implications for non-work travel patterns.

2.7.2. Urban Retailing

Another promising area of growth is the penetration of mass retailers into urban centers and neighborhoods, markets long neglected in favor of the suburbs. However, driven by saturation of suburban markets and the re-population of some center cities by the middle class, mass-retailers and lifestyle retailers are beginning to innovate with new architectural formats in formerly uncharted territories. The K-Mart on 34th Street in Manhattan and the Pathmark grocery store in Harlem are classic examples of this trend, though others may be found coast-to-coast. While many stores have merged seamlessly in to traditional pedestrian districts, others have introduced new parking lots and/or have brought suburban scale to the inner cities. The impact on transportation (particularly transit), purchasing patterns, and the viability of neighborhood centers in light of this trend remains to be seen.

2.8. Spatial Manifestations of Retail Evolution

2.8.1. Retail Development Literature

Traditional retail location models attempt to minimize travel times for consumers given distance-based costs of travel. Christaller's central place theory predicts that, given uniformly-distributed purchasing power and equal accessibility from all points, retailers will locate in an evenly-spaced array of hexagonal market areas. A similar pattern is seen at higher levels of a retail hierarchy, except that the hexagonal market areas of each
retailer covers a larger geographic area. These patterns can be observed closely in some rural plains areas, as in the Dakotas or Saskatchewan. Naturally, competition, transportation infrastructure, topography, and settlement patterns cause a deviation of these patterns in most urban markets. Applebaum, Epstein, and Schell have taken a more empirical approach to identifying retail patterns and have demonstrated the effects of competition, transportation, geography, and land scarcity on retail location decisions. Jones cites five types of barriers define the market area of a given retailer: Institutional barriers, such as national borders; natural barriers, like mountains or rivers; Household distribution barriers, as determined by the density and spatial allocation of consumers; transportation barriers, expressed as a decay curve which is a function of distance, and competitive barriers, which result from the activity of competing firms.

This characterization makes evident a simple but often overlooked aspect of transportation and land use planning. While transportation accessibility is an important component in the retail behavior of a given area, it is only one of many influences that determines the shopping behavior of consumers.

Competitive market effect can cause retailers to locate in areas that are sub-optimal for transportation efficiency. In a classic example of two identical ice cream vendors on a beach, Hotelling demonstrated the effects of competition on spatial location of retailers. He showed that under competitive conditions, it is optimal for retailers to cluster together to gain the largest possible share of a given market. By doing so, the maximum total distance traveled by consumers is maximized. Under cooperative conditions, by contrast, the vendors would agree to split the market and would locate themselves spatially in a manner that minimizes consumer travel.

---

18 Christaller (1933).
2.8.2. Key Spatial Phenomena of Contemporary Retailing

In general, retailing in metropolitan areas is much less centers than in the transit heyday. Ill-defined retail ‘nodes’ are scattered through metropolitan suburbs, sometimes stretching for miles. In an extreme case, the Interstate 5 corridor between Los Angeles International Airport and San Juan Capistrano, CA (approximately 50 miles) is very nearly a continuous strip of commercial development. The most attractive destinations in these nodes rise and fall with the location of the most viable competitors at a given time. This section examines a few key spatial phenomena of the contemporary retail environment.

2.8.2.1. The Demise of the ‘Hot Corner’

In conventional retail districts of the transit heyday, where customer mobility is limited, the value of commercial land was determined by its proximity to high-traffic streets near major transit trunk lines or other pedestrian crossroads. This location, where rents are the highest, was affectionately dubbed the ‘hot corner.’ (Figure 2-4) Merchants with higher sales per square foot (as in fashion) were willing to pay the most to be at the ‘hot corner.’ Merchants in sectors with lower sales and lower value of high pedestrian volume tended to locate further away. In auto-oriented cities, the concept still holds some validity (with street corners replaced by freeway cloverleafs and the intersections of major arterial roads), but the ‘hot corner’ is more likely to be near a freeway off-ramp than in the center of a CBD.

The combination of high customer mobility from automobiles, coupled with the inherent drawing power of large mass retailers, has greatly diminished the concept of ‘hot corners’ in modern retailing. More commonly, the ‘hot corner’ is relative to the location of a Home Depot or regional shopping mall which, within reason, can locate in a number of locations near this hypothetical optimum. For a customer in an automobile, a

footnote:

20 Hoteling (1929).
displacement of a half mile represents just a minute of additional drive time, and is not out of the way if the retailer a destination in itself.

![Bid-Rent Curve](image)

**Figure 2-4.** Bid-Rent Curve for a Hypothetical Retail ‘Hot Corner’ (Jones 1990).

### 2.8.2.2. Overstoring

Another common phenomenon in modern sprawl environments with rapid retail evolution is ‘overstoring,’ i.e., a predatory move on the part of one retailer to drive another competitor (perhaps older, smaller, or somehow less appealing) out of business. Overstoring refers to the temporary over-capacity of retail space in an area during a period of competitive transition (i.e., until some stores are driven out of business). The impetus for overstoring may be the introduction of a new retail format (e.g., superstores replacing smaller discounters, home improvement warehouses replacing hardware stores), or simply a corporate decision to enter a market to challenge the dominant competitor. Overstoring may also occur when consolidation in an industry sector creates a large redundancy in a particular area.
Problems of overstoring tend to be pronounced in automobile-oriented retail districts, because it may create redundancies of purpose-built retail structures that are difficult to adapt to new uses, and because the scale of obsolete or overbuilt can be enormous, as when entire shopping malls fold. The latter has led to a ‘dead malls’ phenomenon that plagues many cities and towns with older commercial strips.

2.8.2.3. Leapfrog Development

Another characteristic of centerlessness is the tendency of new retail development in sprawling environments to ‘leapfrog’ existing development, rather than densify or rebuild on once-developed lands. This can be a symptom that there is a glut of commercial land, but the abundance of developable space in suburban districts, and the localized control over zoning regulations, give few incentives for tight land use control. As as older layers of development age, and population spreads outward, new bands of retail development follow into formerly exurban landscapes.

In a hypothetical example of spatial transformation, in Figure 2-5, several small hardware stores (A, B, C) control a certain market. An early home improvement warehouse (such as the now defunct Hechinger chain) opens a store of 80,000 square feet in a nearby location (D). Notice that since it is such a large draw, there is neither a need nor the space to fit it in the older, denser part of the commercial strip. The Hechinger store drives the local hardware stores out of business after a period, leaving three vacancies. A few years later the surging Home Depot chain opens a larger, more efficient location nearby (E). With more home improvement stores than the market can support, Home Depot drives the Hechinger chain out of business, leaving vacancies at A, B, C, and D.
a.) Initial Scenario:
Three small-scale in-town stores control a given market, serving 100% of the market's needs.

b.) A larger-scale competitor moves in on an out-of-town highway. This produces more supply that the market can sustain, driving out two less-competitive rivals.

c.) An even more competitive retailer captures the entire market area, subsuming all other local competitors. All commerce now occurs on the highway strip.

Figure 2-5. Spatial Phenomena in a Hypothetical Market.
Over the course of this transformation (perhaps as short as a decade), the location of commercial activity in this market segment has shifted from smaller-scale, transit and pedestrian-friendly locations in ton centers to two separate locations on an adjacent commercial strip. Clearly, the centerlessness poses difficulties for a transit provider who is trying to keep up with travel demands. It also poses difficulties for transit customers, whose CBD shopping opportunities have been replaced by large automobile-oriented developments on a highway strip that is neither convenient nor pleasant.

2.9. Conclusion

There are continual thrusts of change in the retail sector, and that the industry adjusts to reflect broader changes in society, lifestyle, urban form, and transportation. This continual change is hastened by the fierce competition between retailers, who are competing for finite consumer expenditures, and who evolve and adapt to seek a competitive advantage in the evolving marketplace. New players continually enter the market and transform the way that retailing is conducted—supermarkets replaced corner groceries, “big-box” discounters superseded department stores, power centers eroded the shopping base of malls. The development of malls in the 1960s, 1970s, and 1980s was destructive to many traditional downtowns. However, those malls are now under threat themselves from the newly-emergent “category killer” stores, or “power centers.” In response, malls are reinventing themselves as entertainment-oriented retail centers as opposed to places to shop for more routine merchandise.

While the development of the automobile revolutionized the industry, it is important to realize that the impact of automobile on retailing is more complicated simply the mode of access for customers. Increased consumer mobility freed retailing from numerous constraints that allowed a complete transformation in the economic fundamentals and
business organization the industry. Retailers could explore a plethora of new business techniques: seeking out less expensive lands on the fringes of cities; selling more goods in larger quantities on a single visit; specializing into categories that require larger trading areas to support; and achieving new efficiencies of operation by agglomerating many smaller merchants of basic goods such as food and clothing. Automobiles did not spur all of these changes on by themselves. Rather, once retailers began to understand the ramifications of widespread consumer mobility, they researched and adopted other innovations in management, pricing, product mix, information technology, and vertical integration with suppliers and producers.

The spatial implications of this revolution that are seen in cities today go beyond simple transportation considerations. The scale and distribution of Wal-Mart stores, for instance, reflects an underlying equilibrium of distribution efficiency and customer access, modification of which will have an impact on the cost structure of the firm that will be felt by consumers.

The rampant competition in retailing forces companies to operate extremely efficiently in order to keep prices low while still earning acceptable profits. Especially in the more mundane sectors of the industry, this allows retailers to engage in low-margin activities with a correspondingly low level of risk. Innovations that ‘break the mold’ thus have inherent higher level of risk without bringing higher returns. At present, station-area development, which relies less on automobiles, may incur higher development costs, and may not be found appealing by consumers, presents this risk dilemma to developers. As a relatively unproven concept, station area development presents a risk dilemma to retailers and developers—higher risks without necessarily receiving higher returns.

In summary, the retail industry today is different from what is was 10, 20, or 50 years ago, and the next business revolution on the horizon—Internet retailing—could transform it yet again. In the contest to satisfy customer tastes, adapt to or create lifestyles, and maintain their own competitiveness, retailers will continue to alter the commercial
landscape in a relentless fashion. For better or for worse the implications of these evolutions for urban form and transportation often catch cities and regions by surprise as they sweep through the retail landscape, placing planning and regulation in a reactionary role.
Chapter Three

The Practice of Retail Development

3.1. Introduction

The 'retail development process' the collection of activities required to conceive, design, lease, finance, and construct a commercial real estate project for retail use. It encompasses a wide range tasks, performed by a wide range of professionals, such as architects, market analysts, lawyers, engineers, public relations consultants, lenders, planners, accountants, brokers, and owners. The 'developer' is the single entity responsible for orchestrating these professionals and taking responsibility for the eventual success of the project.

There is no precise definition of 'the development process.' Moreover, specific procedures and policies vary from developer to developer. Interpretations vary, but the retail development process usually contains at least the nine steps shown in Table 3-1:

<table>
<thead>
<tr>
<th>The Retail Development Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visioning</td>
</tr>
<tr>
<td>2. Site Evaluation</td>
</tr>
<tr>
<td>3. Land Acquisition</td>
</tr>
<tr>
<td>4. Schematic Design &amp; Approvals</td>
</tr>
<tr>
<td>5. Costing</td>
</tr>
<tr>
<td>6. Raising Equity</td>
</tr>
<tr>
<td>7. Financing</td>
</tr>
<tr>
<td>8. Construction</td>
</tr>
<tr>
<td>9. Marketing</td>
</tr>
</tbody>
</table>

Table 3-1. The Retail Development Process.
As with the retail industry in general, real estate development is a much more complex, competitive, and incorporated world than in the heyday of transit. Thus, the dynamics of contemporary land development, including design, financing, leasing, construction, and management, must be taken into consideration when evaluating the prospects for transit retailing in the modern age. Indeed, many development practices today—in both the public and private sectors—conflict with the needs of truly transit-accessible retail development.

For any development company to remain viable of any length of time in this difficult industry, it must exercise caution in its investment decisions, and take extreme care to manage project risks and costs. Retail developers are in the business to turn a profit—it is not necessarily in their interest to produce the type of development that transit planners desire to reinforce a transit system, unless there is a solid economic rationale for doing so. In instances where the public-sector’s desire for station-area development is not complemented by favorable market signals, the public sector may have to devise incentives for bridging the financial gap to induce private development.

In many low-density cities with new rail starts, the built environment is not automatically conducive the transit system that has just been interjected into the urban fabric. There may be few existing business districts or retail structures within close proximity of the future stations. Thus, most new retail development, if it indeed occurs, will require new construction or adaptive reuse of existing structures (e.g., a warehouse or former factory). These activities will require development expertise on the public sector as well as in the private sector.

A city’s existing zoning laws, development approvals processes, and internal organization may not be aligned to make station-area development as seamless and transparent as it might be. Because it is the private sector that will bear the financial risks of creating transit retail space, it is critical to understand the development process and the
concerns of developers, and plan station-area development with the private sector in mind. The public sector’s transit-oriented development implementation strategy must be engineered to reduce hurdles to station-area development, so that it is at least as rewarding for developers to invest there as in conventional greenfield sites. A prerequisite to developing the TOD implementation strategy is an understanding of the developer’s world, how it supports prevailing patterns of development, and how the public sector can work to neutralize or reverse countervailing incentives.

3.2. Development Risk

As a general rule, a retail developer seeks to minimize risk for a given amount of anticipated return. A large number of potential risks occupies the retail estate developer’s mind in any project. These projects require huge amounts of capital investment, both equity and long-term debt, and their eventual economic success is far from guaranteed. The two major categories risks faced by developers are ‘completion risk’ and ‘market risk.’

3.2.1. Completion Risk

Completion risk is the uncertainty that a developer can finish a project in a timely manner without incurring debilitating financial losses, legal challenges, or any other natural or manmade disaster. The developer must complete the project on a reasonable schedule so that it can begin generating a positive revenue stream. Completion risk is due to myriad factors, including construction delays, NIMBYism, lengthy development approval processes, and legal complications, among others. A developer needs to maintain an adequate velocity of capital,’ the rate at which money invested in a project returns as revenue, in order to meet real capital expenses and satisfy financing requirements while still earning a level of profit justified by the uncertainty of the venture.
3.2.2. Market Risk

Market risk is the uncertainty of delivering what the retail market wants, when it wants it. This refers to the market’s ability to absorb a given amount of retail space, the ease of leasing up a newly-constructed space, and the ability of the project to generate the expected revenues (i.e., projected rents) during its economic life. Some factors contributing to market risk are functions of the larger economic climate at the time of project completion, but other factors are very specific to the quality of an individual project’s design and management. Unusual siting or format, reduced project scale (higher per-unit cost), lengthy development times, and a lack of precedent (the project does not emulating tried-and-true formula) increase market risk, a potential shortage of parking, etc. can all increase market risk.

3.3. Project Financing

Development projects typically have at least two lenders—the construction lender (finances construction) and the permanent lender (long-term mortgagee). Each must be satisfied with the economic potential of retail projects in order to lend the requisite funds. Financial markets and real estate tax codes have increased in complexity after the overbuilding experienced in the 1980s. As a result of these changes, real estate has become relatively less attractive as an investment opportunity compared to stocks, bonds, and other investment mechanisms. In addition, real estate finance today is more heavily influenced by the public capital markets through Real Estate Investment Trusts (REITs), instead of the traditional lenders like banks, insurance companies, and pension funds. Securitized REIT capital demands a higher return on investment that the conventional sources, so there is tremendous pressure for developers to stick to development formulas that are proven successes. Innovative projects may have the potential to produce higher investment returns, but they also carry much more risk. Thus, it is more difficult to finance projects that lack precedent as transit-station development projects often do.
3.4. Development Innovations of the Shopping Center

Management acumen is as important as planning, financing, and construction acumen in retail development. Aside from the automobile, the most important single innovation in retail development since the heyday of transit was the emergence of the modern shopping center in the early 1950s. The shopping center has introduced a number of management practices that have profound implications on the economics and spatial development of retailing.

Out-of-town shopping centers have gained a competitive edge over conventional retailers by carefully controlling the development and leasing of their centers. Unlike a traditional commercial center, with fragmented ownership and no holistic management oversight, shopping centers carefully engineer the tenant mix and physical ambiance of their centers. Thus shopping centers can guarantee customers very carefully-controlled environments without the 'hassles' and unpleasant edge which public streets can sometimes have, and also a 'one-stop' shopping experience for many types of goods. For their part, retail tenants can use standardized national store formats, without costly custom architectural design. There is also no need to seek approvals from local planning agencies, as with freestanding development parcels, since it is simply leasing an indoor space.

Moreover, shopping center developers can develop 'optimal' tenant mixes that maximize the return on total investment by charging differential rents to individual tenants. This allows shopping centers to charge lower rents, or even no rents, to major anchor tenants. The developer then makes up the difference by charging high rents to smaller stores which 'feed' off of the traffic of the tenants. This management technique may be applicable to the revitalization of urban shopping districts as well, by using tax incentives...
to lure major anchors into urban shopping districts, using the tax revenues of other stores to compensate for the shortfall.¹

Rents are paid to the shopping center manager in the form of base rents as well as percentage rents, based upon sales. The implication of these variable rents is that shopping center managers are inclined to attract the tenants that generate the most sales, and thus can pay the most in rents to the landlord. This tends to favor larger, national chains with high name recognition and proven sales formulas, as opposed to smaller, regional chains or independent proprietorships.

Contractual relationships of shopping center leases have improved created competitive advantages by influencing competition and restricting the amount of nearby competition. For example, the lease of a major Rhode Island retail development² illustrates some common features of a retail shopping center lease. First, the retail tenant:

...acknowledges and agrees that the Shopping Center's success is dependent on the continued operation of Tenant's business, and that the maintenance of the character and quality of the shopping center is enhanced by the continued occupancy of the Premises and the regular conduct of the Tenant's business...

If the tenant fails to continue operating the store, there are substantial damages to be paid to the landlord. This condition helps to ensure that only financially sound and viable tenants are willing to enter a lease in the center, biasing shopping center leasing towards larger chain retailers at the expense of local franchises and independents.

Second, there are restrictions on the tenant’s ability to open competing retail outlets in other nearby locations:

¹ The Economist, March 1, 1997
² The name is withheld to protect confidentiality.
...Tenant shall not directly or indirectly, without the prior written consent of the Landlord, operate, manage, franchise, license, or have any interest in any other business located within...(15) miles from the outside boundary of the Shopping Center, which business is engaged in the same or similar use as the provided for in this Lease...

This prevents a center’s own tenants from ‘jumping ship’ and undermining its viability. In return, the tenant is protected from other competitors, because the shopping center is contractually forbidden from leasing to them during the term of the first tenant’s lease.

Of course, both parties are subject to the influence of other competing centers. It is clear to see, however, that these competition clauses can spawn the development of multiple, full-service shopping centers or ‘parasitic’ development in the vicinity of a given shopping center. Forbidden from entering leases in the first center, new competition must seek an alternate development location within the same vicinity if it desires access to that market. This creates a decentralizing phenomenon in suburban shopping districts, and leads to the construction of vast, multi-tenant retail projects in the a single vicinity.

The lease requires the tenant to pay into ‘common-areas fees’ for the physical maintenance of common areas, security, lighting, parking, etc., and ‘marketing fees’ to pay for advertising and publicity efforts that promote the entire center. These further enhance the general welfare of the center and provide efficient common services for the retail tenants by pooling costs and reducing redundancies.

All of these management techniques to not protect shopping center owners from shocks and industry transformations. For instance, competition superstores and consumer boredom with regional malls are forcing traditional malls to reinvent themselves as specialty centers (e.g., fashion malls) or explicit entertainment destinations. Still, entire malls can succumb to competitive pressures or obsolete formats: there are an estimated
4,000 vacant or ‘dead’ malls in the United States. Major drug store chains have found
that their sales increase when they move from ‘in-line’ shopping center locations to
larger, freestanding buildings with easier automobile access and higher visibility.
Nonetheless, the privately-managed format continue to have a major influence on the
spatial characteristics of the retail sector.

3.5. Major Considerations in the Retail Development Process

Building upon the definition of ‘the development process,’ put forward in Section 3.1,
the following Table 3-2 lists key developer concerns at each stage in the development
process, as well as risk-reducing strategies that a risk-averse developer might pursue.

Notice that every stage in the development process involves decisions through which
developers can minimize their exposure to risk to a degree by choosing proven
development techniques that are known to produce the desired results. This environment
leads to an industry where ‘proven formulas’ for success can hold significant sway, and
single innovations are repeated hundreds or thousands of times. It can therefore be
difficult to persuade conservative retailers, developers, or lenders to deviate from highly-
refined, lowest-cost success formulas. Yet, this is exactly what is required for many
transit retailing projects with major deviation into unfamiliar store formats, unknown
customer bases, and non-standard parking ratios. The approval processes for station-area
development may also be a concern, because it adds completion risk and potential project
delays to projects, raising costs. Development process considerations specific to station-
area retailing will be explored later in Chapter Four.
Chapter Three
The Practice of Retail Development

<table>
<thead>
<tr>
<th>Development Phase</th>
<th>Major Developer Considerations</th>
<th>Likely Actions to Avert Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visioning</td>
<td>Create a competitive project that attracts retailers and investors, maximizing the return on investment.</td>
<td>Cater to the needs of reliable and desirable tenants, such as national chains retailers.</td>
</tr>
<tr>
<td>2. Site Selection</td>
<td>Choose site with competitive advantages (visibility, low cost, etc.) and low development cost.</td>
<td>Select urban fringe sites with good customer access but few encumbrances.</td>
</tr>
<tr>
<td>3. Land Acquisition</td>
<td>Acquire land as quickly as possible without complications or prolonged negotiations.</td>
<td>Avoid site assembly or parcels with possible contamination. Land bank agricultural or undeveloped land if possible.</td>
</tr>
<tr>
<td>4. Schematic Design and Approval</td>
<td>Adopt design formats that are appealing to tenants and lenders, and avoid prolonged delay in permitting and approval.</td>
<td>Avoid unorthodox designs or sites which require special public approvals or design reviews.</td>
</tr>
<tr>
<td>5. Costing</td>
<td>Control development costs so that space can lease at a competitive rate and the return on investment is maximized.</td>
<td>Avoid unnecessary costs items, amenities, or design features that cannot be passed on through rents and sales margins.</td>
</tr>
<tr>
<td>6. Raising Equity</td>
<td>Attract enough investor equity to satisfy the needs of financial lenders.</td>
<td>Avoid unorthodox formats that raise the ratio of equity to debt.</td>
</tr>
<tr>
<td>7. Financing</td>
<td>Secure financing quickly, with the most advantageous interest rate and terms.</td>
<td>Satisfy investors that project is not overly risky by adopting ‘proven’ retail development techniques.</td>
</tr>
<tr>
<td>8. Construction</td>
<td>Build the project at the lowest possible cost, on time and on budget.</td>
<td>Avoid conditions that can raise construction costs such as constrained sites or unknown subsurface conditions. Avoid parcels that require demolition or environmental abatement.</td>
</tr>
<tr>
<td>9. Marketing</td>
<td>Provide an attractive project that attracts both tenants and retailers.</td>
<td>Adopt formats that retailers and customers are known to favor.</td>
</tr>
</tbody>
</table>

Table 3-2: Major Developer Considerations in the Detail Development Process

3.6. Conclusion

The central concern of retail developers is to minimize, or at the very least be able to identify, sources of risk. Retail project risk is multi-faceted, arising from the up-front capital cost of studying potential developments and producing preliminary design,
obtaining public approvals, seeking and recruiting tenants for the proposed project, securing financing, construction the project on time and budget, and leasing any space that was not pre-leased before construction. Furthermore, once the development is constructed, the returns on the project depend in part on the sales of the tenants.

Thus, retail developers have very real incentives to develop in proven formats and locations—locations that high-rent tenants are attracted to; locations that the lending markets, banks, pension funds, and REITs are most willing to back; building sites with minimal encumbrances that could raise construction costs; and sites that consumers will find safe, attractive and convenient. In sum, these factors tend to favor ‘easier’ greenfield sites in suburban areas, where the majority of contemporary retail experience has been gained.

The retail industry is, by its very nature, a risky business. Retailers, retail development firms, and lenders are often hesitant to engage in new ventures that entail increased risks without the promise of substantial rewards. Moreover, retailers devote enormous time and energy to researching their prospective markets, identifying customers needs, and developing product lines and stores to appeal to these customers. Less frequently, major management or technological innovations also sweep through the industry, threatening to bankrupt firms which do not ride the new wave of innovation.

At least some national developers are experimenting more and more with dense, infill development projects in core urban areas, which is gradually changing perceptions of the risk and viability of urban retail development projects. Still, transit retailing, with its higher densities, reduced emphasis on automobile access, and less familiar transportation accessibility contours, will be very unfamiliar to most developers in cities with new rail transit starts. Thus it is imperative for public agencies involved in station-area development projects to consider the financial and risk burdens of special development approvals there, and to actively work to minimize impediments to private investment.
Chapter Four

Implications of Retail Evolution for Transit Retailing

4.1. Introduction

The previous chapters have examined the retailing from the private sector perspective, illustrating the complexity and competitiveness driving evolutions in the industry. An important lesson from this examination is that the contemporary retail industry is very different from the heyday of transit 50 or 100 years ago. What, then does this imply for the concept of modern transit retailing, orienting commercial activity toward a transit clientele? This chapter will analyze the prospects for transit retailing in light of the rapidly-evolving retail sector.

All retail activity, including catalog sales and Internet commerce, has some physical manifestation in cities. There have always been linkages between transportation technology, settlement patterns, and commerce, which have usually been defined by the mobility limitations of the prevailing transportation technology. The concept of station-area retail development, particularly in low-density cities, is fundamentally different from other spatial evolutions in retailing because it attempts to reduce the need for mobility while still providing a reasonable equivalent level of accessibility as provided by the automobile. However, constrained by modern economic forces, competitive pressures within and outside the industry, and consumers who can vote with their feet (or their steering wheels), retail venues born of this new paradigm must hold their own in the competitive sphere in which they are placed. In a low-density city like San Juan, this implies competitiveness against more conventional retail sprawl and the near-ubiquity of automobiles.
4.2. Urban Form and Non-Work Travel Literature

The design and transportation theory of transit-oriented development has spawned a wave of academic research into the transportation impacts of compact development forms. Exploring the links between compact urban form and travel behavior is a young but vigorous area of research, which, to date, has not been able to illustrate definitive proof of such a link. Proponents of transit-oriented development claim that compact development, with close access to high-quality transit service, can replace (and not simply supplement) automobile trips with transit, bicycle, or walking trips. The interspersion of residential districts with mixed-use activity nodes places retail and employment destinations within closer reach of nearby residents, and the mobility of those who cannot, or chose not to drive is also greatly enhanced. For many proponents of transit-oriented or neo-traditional development, such as Calthorpe, Hylton, Barnett, Kunstler, and Langdon, multi-modal transit and compact development forms are one component of a comprehensive transportation, environmental, and social prescription for American cities.

These notions are hotly contested, and on the other side of the philosophical debate are those who point to a public plebiscite of automobile usage and lifestyles as an indication of its advantages:

Ownership of an automobile empowers an individual to make a vastly wider range of choices relating to personal mobility than he or she would have without a car. Auto drivers are freed from the constraints of the fixed routes and rigid schedules of train or bus riders. They can choose many more destinations; select the companions, if any, traveling in their vehicle; carry much more luggage than they could on a bus; never have to stand because all of the seats are taken; stop for refreshment when they want to; listen to their favorite music or news; and not worry (too much)
abt about being mugged while waiting at the bus stop or subway station. That this sense of empowerment exists is revealed by the fact that the owners of 160 million American autos pay thousands of dollars every year to empower themselves and ensure they have these choices. The defenders of the automobile and current growth patterns acknowledge their shortcomings, but advocate less revolutionary approaches and a more ‘balanced’ assessment of the true costs and benefits. This debate has underscored the need for more academic research to reinforce supporters’ claims about transit-oriented development in contemporary American cities. This effort is underway but is far from conclusive. One key problem is the lack of prototype transit-oriented developments, especially in newer, lower-density environments. Thus, older urban districts built in the heyday of transit are often used as laboratories to predict the benefits of new TOD projects. As more and more station-area development occurs, opportunities to draw analyze their benefits and shortcomings will be greatly expanded.

Berman (1996) provides a useful summary of research into the transportation impacts of transportation-oriented development. Cervero and Gorham (1995), Owens (1992), and Kitamura, et. al (1995) have begun to disaggregate the relatively coarse data of older urban form-travel studies. Handy (1996) has attempted to demonstrate links between urban form and non-work travel behavior, comparing neighborhoods of different density and form in Austin, TX. She has found that while residents in compact neighborhoods tend to make more walking trips, they do not necessarily replace driving trips. In addition, residents tend to place a value on choice of travel destinations (e.g., the choice of more than one local grocery store), though it results in more travel. Handy did not find evidence that architectural design features were influential in residents’ decisions to walk or not to walk. In another series of case studies, Handy (1997) found ambiguous

---

1 See Niles and Nelson (1999) for a useful summary of empirical studies on the relationship of urban form and non-work travel.
2 Dunn (1990).
evidence as to whether neo-traditional development could reduce levels of non-work travel. She notes that a number of methodological issues related to dis-aggregating relationships hinder the measurement of urban form and travel linkages. Crane (1996) suggests that by placing retail development and employment in close proximity to residential areas, the frequency of automobile trips may actually increase. Downs (1994) calculated the number of TOD nodes required to support the average employment and residential growth of metropolitan areas in the 1980s. He concluded that a large number of TODs could support this growth, but the financial costs and lead-time of developing a transit infrastructure to support this development may not be financially feasible.

Whether or not the empirical evidence eventually refutes or reinforces the trip-reduction properties of transit-oriented development, fixed-rail transit systems will remain important features of urban transportation networks and cityscapes. Questions remain about the compatibility of modern retailing with transit, and ways that cities can leverage the presence of fixed-guideway transit to create or reinforce activity centers within their boundaries. The remainder of this chapter will approach the issue on a different tack, comparing design and spatial characteristics of transit retailing with prevailing trends in the retail industry.

4.3. Characteristics and Needs of Transit Retailing

As introduced in Chapter One, transit retail projects may be considered ‘successful’ if they are economically viable while capitalizing on their proximity to transit in terms of customer access. According to the tenets of transit-oriented design, transit retail environment must be highly accessible to a clientele arriving mostly or in part by transit. In addition, it must maintain that accessibility over the long term as the industry evolves and individual retailers open and fold. At this stage it is useful to expand on this definition by stipulating five key physical characteristics which such a transit-oriented retail development would ideally possess:

---

3 See Dunn (1998).
• **Clustering of Retail around Transit Nodes:** First, it is important in transit retail environments for stores to be clustered around the transit station or stop. The traditional rule of the retail 'hot corner' is still very important in transit retail situations, with the point of highest access to customers at the most centralized and accessible point. Retailers in such locations have access to the maximum transit rider, pedestrian, and transfer volumes. If a vacancy opens in such a centralized location, the value of being so accessible to transit riders will compel other venues to occupy that desirable location in short order, re-using the existing space or remodeling or demolishing the structure if necessary.

• **Compact, Pedestrian-Oriented Design:** As with any transit-supportive design, compact development and sensitivity to pedestrian design are important features of transit retailing. Stores cannot be separated by sprawling parking lots, large blank facades, or intimidating high-traffic environments that are unsafe, undesirable, of demeaning to customers arriving on foot.

• **Convenience En Route to Destinations:** Because pedestrians cannot cover large distances in short amount of time, it is important that retail activities are located in a logical place relative to the destination for which the pedestrian is headed. This includes proximity of transit to transfer stations, so that it is simpler for riders to stop over in mid-trip to patronize a retail outlet.

• **Visibility and Legible Pedestrian Approaches:** Automobile-oriented retailers use large and distinctive facades and signs to attract customers, and position their stores for maximum visibility from adjacent roadways. Similarly, in a transit environment, retail spaces must be designed so that they are clearly visible from adjacent streets, transfer centers, and transit stations. Preferable, major retail trip attractors will have direct visual lines from station headhouses and trains, so that they provide passive advertising to passers-by. In addition,
there should be clear, safe, and inviting pedestrian connections, signed if necessary, directing transit riders from station areas to retail venues if necessary.

4.4 Transit Retailing: Competitive Challenges

How compatible is this vision for transit retailing with the prevailing trends in the retail industry? Clearly, there are vast differences in retailing today as compared to the heyday of transit when it was the defining technology of accessibility. There are a number of ways in which the retail industry is diverging from this vision of compact retail activity, but there are also circumstances where transit retailing may be competitive. This section explores some specific conflicts between the transit retail ideal and the situation in modern cities.

4.4.1. Scale of Contemporary Retailing

Clearly, issues of scale pose critical limitations on transit retail development. For example, superstores may occupy 100,000 square feet of floor space (plus parking for several hundred vehicles), and draw upon a customer base of 50,000 households or more. Such an enormous entity is a major attractor of shopping trips, yet it is not necessarily compatible with the pedestrian scale of transit nodes. A modern highway commercial strip stretches for miles, and contains millions of square feet of retail space. Even if a transit service was available, an elaborate shuttle system might also be necessary to interconnect the store to each other and the station. Certain specialty goods stores may draw customers from throughout a metropolitan area, implying a long and complicated trip for most of those patrons if they arrived by transit. It is difficult to argue in situations such as these that transit offers a viable alternative for the majority of customers in these areas.
Chapter Four
Implications of Retail Evolution for Transit Retailing

4.4.2. Creating and Maintaining the ‘Value of Place’ in Retail Nodes

Within retailing, the influences of industry shakeouts, failed commercial properties, and functionally obsolescence properties continually jostle the spatial orientation of retailing in a given city. In typical sprawl environments, the continual construction of new retail properties along highway strips or on fringe urban lands is routine in the competitive repositioning. National big-box chains penetrating a new market will routinely construct new structures instead of recycling the old, smaller building shell. When the clientele is arriving by automobile, a displacement of a mile or more is not a major inconvenience, and consumers will migrate to the new location if it is perceived as offering greater value, convenience, or selection than existing competitors. The continual recentering of retail activity nodes in this way on inexpensive land is a key dynamic of urban sprawl. Because the consumers are so mobile, there is little incentive for the retailer to seek out central locations with more expensive land, especially when the retailer is large enough to be a draw in itself.

A major challenge for transit retailing, then, is determining how to retail the ‘value of place’ of a transit node, ensuring that the transit station itself is at or near the ‘hot corner’ that retailers will pay a premium (in rents or development costs) to be near. In the heyday of transit, this was not an issue because choice customer flows naturally congregated around transit lines and infrastructure. In the modern automobile city, however, the wide availability of commercially-zoned land, the pulling power of large retailers and shopping centers to attract customers almost regardless of location, and the rapid obsolescence of retail structures complicate the creation and maintenance of a desirable commercial node in station areas. The over-supply of commercial land, in turn, is fueled by municipalities’ desires to maximize their fiscal bases with high-tax developments (like retailing) that pay in far more than they require of municipal services.

4.4.3. Incrementalism of New Retail Market Growth
The retail landscape of cities where rail transit is introduced is already in place, most of it in suburban locations around highway nodes. New transit retail growth away from these locations can only capture the increment of new growth in the metropolitan area, perhaps consisting of a few percentage points per decade. Referring to residential densification proposals, Downs refers to this phenomenon as the 'Marginality Problem.'

4.4.4. Disadvantages for Consumers

It is very important to remember the implications of transit travel from the perspective of the customer. Niles and Nelson\(^5\) cite five 'consumer behavior characteristics,' shopping habits and tendencies characteristic of a broad spectrum of consumers: bargain hunting; comparison shopping; preference for variety; destination flexibility; and schedule flexibility. With transit retailing in most environments (Manhattan and central Tokyo are clear exceptions), implicit limitations are placed the ability of consumers to maximize these behaviors, as shown in Table 4-1.

<table>
<thead>
<tr>
<th>Consumer Behavior Characteristic</th>
<th>Limitation on Consumers when Shopping by Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bargain Hunting</td>
<td>Access to store with best sales may be restricted; desired quantities may be too large to purchase at once without an automobile.</td>
</tr>
<tr>
<td>Comparison Shopping</td>
<td>It may not be possible to reach all desired retail outlets in a particular category.</td>
</tr>
<tr>
<td>Preference for Variety</td>
<td>Stores located off of transit lines, or requiring difficult or long trips, may not be feasible to access.</td>
</tr>
<tr>
<td>Destination Flexibility</td>
<td>Once a trip has begun, it may be difficult to decide to change destination or visit another retailer that was not originally in mind.</td>
</tr>
<tr>
<td>Schedule Flexibility</td>
<td>Transit schedules and travel times may restrict the times one may have access to frequent service, or reduce the number of errands that can be completed in a given amount of time versus the automobile.</td>
</tr>
</tbody>
</table>

Table 4-1. Some Transit Limitations on Consumer Behavior.

Additionally, comfort and image issues, unsavory bus stop locations, and the difficulty of wielding packages also factor into the reduced use of transit for shopping trips. For many travelers and trip types, transit is a last resort after private autos, ride-sharing, taxis, or jitney services.

4.5. Transitional Considerations for Transit Retailing

For station-area retail centers to thrive in the long term, and thus continue to provide shopping opportunities within close proximity to the limited number of transit stations in a city, there must be a magnet to attract retailers to the site again and again, in spite of retail evolutions. If a long-term station-area anchor retailer succumbs to competition or obsolescence, there must be a desire of other, more competitive tenants to move into that physical space to fill the commercial void that would be created. Or, at least, the more up-to-date and competitive retailers should be within close proximity to another station, so that passengers can still access desirable retail opportunities by transit. Both of these situations require the station-areas to maintain an attractiveness as retail destinations as compared to other, off-system locations that give the retailer access to the same target population by automobile, but not by transit.

Creating an economic value of place in station areas can be difficult in cities whose physical structure largely presupposed travel by automobile. It quite literally requires “buy-in” from both the retailer and the consumer. The retailer must believe that the station-area site presents advantages such as convenience for customers (e.g., allowing shopping on the way home from work) or exclusive access to a market segment (e.g., the transit dependent). The customer likewise must feel it is advantageous, or at least not less advantageous, to shop via transit instead of by automobile.
4.5.1. Transit Retailing: Leader or Follower of TOD?

This is a "chicken-and-egg" dilemma about the valuation of the transit market for both the retailer and the consumer. The value of the location near the transit system for retailers is dependent on the market advantage of having access to a shopping public which uses the system. However, the number of consumers that are likely to use transit for shopping depends on the quantity and quality of retailers accessible by the system. It is difficult to draw retailers to a transit station area if there is no demonstrable value to the ridership market, and if no retailers are attracted, there may never be a demonstrable transit consumer base. Thus a retailer can locate in an area other than a transit area, or introduce highly automobile-oriented development into a station area, and avoid the possible inconveniences of congestion and limited parking that might discourage the auto-oriented clientele.

Assuming that retail interest do find a competitive advantage to locating in station areas, the land-rent gradients that are would emerge in station areas might preclude certain types of desirable retail development. Land prices in station areas should naturally rise if an economic value of place is created there. This implies that in a low-density, primarily automobile setting, there may be a cost advantage to being an outlyer from the station area, especially for large retailers with a strong draw that require large amounts of space (such as a grocery store or major big-box retailer). Lower land costs can translate into lower sales prices for consumers and more attractive investment for developers. If there retailers can service the same audience (primarily through automobile access) from a less-costly land parcel on the fringe of an activity center, then the economic value of place in the center may be subsequently undermined by the shift in the retail center of gravity. Such behavior is one of the hallmarks of the conventional sprawl development mentality. It is particularly dangerous because the largest anchor tenants that may be most beneficial as the centerpiece of a station-area retail development also have the greatest magnetism in drawing customers to almost any place they choose to locate. This kind of
outlying anchor could draw additional smaller businesses away from the station area to take advantage of the traffic generated by the anchor.

4.5.2. Station-Area Functional Conflicts

An additional risk to station-area retail development is a potential conflict among station area functions. As stated previously, transit station areas can perform a number of functions, including transportation terminal and transfer functions, being a community focal point, and potentially being a center of commerce, housing, and employment. In general mixed-use land development is regarded as desirable because each function (residential, employment, commercial) reinforces the others and creates 24-hour life in the station area. However, with major retail developments, the other functions of a poorly-designed station area may interfere with the creation of a transit-oriented commercial district.

For example, the presence of a large park and ride facility may undermine the development of major retail facilities, even though at face value the auto draw of the park-and-ride facility may bolster the customer traffic that the retailer desires. First, there are physical compatibility issues in providing a large quantity of park-and-ride spaces while still creating a town-like, safe pedestrian environment. Second, there is the risk that a park-and-ride facility (or a large bus or taxi transfer terminal) will generate significant traffic congestion in the vicinity of the retail outlet, especially in the afternoon peak hours when a tremendous amount of shopping activity takes place. This could frustrate shopper’s ability to reach the retail outlet either on foot or by automobile, making it an undesirable location for retail investment. Third, the high volume of park-and-ride patrons may prompt a development form that caters more towards an automobile environment (capturing the business of those entering and leaving the park-and-ride facility), undermining broader attempts to create a pedestrian mixed-use district that is not overwhelmed by automobile activity. Fourth, a major retailer will almost certainly require some amount of parking spaces for its own activities. If the demand for park-and-
ride spaces exceeds the number provided, there may be spillover pressures that fill up the parking lot of the retailer, frustrating consumers and creating enforcement dilemmas. There may be systems to contravene the overrun of retail parking spaces (pay parking, time limits, shop validations, etc.), but there is also a risk that these measures will create an image that the shopping center is too much of a hassle, impacting the competitiveness of the center against comparable venues located away from station areas.

4.5.3. Conflicting Modal Requirements of TODs and Contemporary Retailers

The automobile-pedestrian conflicts described above are symptomatic of an even broader concern about the coexistence of automobile and pedestrian access to station-area retail venues. A retail development of significant size is unlikely to thrive solely off of transit traffic except in the most unusual circumstances (e.g., big-box venues in Manhattan). Furthermore, given the uncertainties of station-area development for retail firms, especially in new rail starts, investors are unlikely to settle for a development location that does not have an automobile access “safety valve.” Therefore the most desirable locations for station-area retail development are likely to be stations located near major highway facilities or urban arterial streets, so that they can offer the dual advantages of access and visibility for customers of both modes. This poses a number of challenges for transit retailing. The parking/traffic/pedestrian conflicts mentioned previously are likely to be strongest in these locations. Thus a careful balance must be struck between providing automobile access for highway patrons and for investment insurance, and also maintaining a walkable, attractive, pedestrian-oriented environment that buttresses the transit system and provides convenient, safe access to surrounding developments and the transit station. Flagrant mistakes such as setting the retail development back from the sidewalk behind a major parking lot must be avoided. But also, the architecture and design must provide ease of access and visibility for two audiences (auto and pedestrian) with very different needs. It is also true that a station-area offering excellent highway access may also be a candidate for other major types of conflicting development, such as large office or residential complexes or park-and-ride lots as discussed above. In addition, the limited number of station areas with these characteristics in any system
limits the opportunities to develop major retail venues along an alignment. Development may be further constrained by idiosyncratic considerations in a particular station area such as land ownership or acquisition difficulties, existing uses, baseline traffic congestion, site contamination, or land values.

### 4.6. Conclusion

In a number of important ways, transit does not meet the needs of the majority of retailers' and consumers' needs in the contemporary retail economy. Time-pressed, modern consumers are shopping more and more in off-peak evening and weekend hours, when transit service is often at its worst. Transit ridership adds a time penalty in accessing retail opportunities, often limits consumers choices, and restricts the sizes of their purchases. Transit makes shopping with the small children cumbersome, and there may be concerns regarding personal security in some areas. The prospects for transit retailing in the bulk goods market look rather limited, save for those who have access to no alternatives or have the time luxury of frequent trips to grocers and general merchants. The great competitive strength of transit is in traditional urban environments where automobile accessibility is constrained. This raises questions about the feasibility, desirability, and effectiveness of raising similar barriers to automobility where none currently exist.

The irony for transit is that many of the difficulties and considerations discussed above appear to be irrelevant in the traditional, transit-oriented retail center of yesterday: the downtown or main street. Transit access was excellent and pedestrian connections were easy. The large number of shops in a central area reinforced the core even as individual tenants came and went. The large number of people in the area added a feeling of like and safety, while a casual stroll down a street provided all of the passive advertising that a shopper might need. Mixed uses comfortably coexisted on multiple levels and on side streets, while the automobile and pedestrian frontages were entirely co-incident, with a
bias towards commerce conducted on foot or by transit. Rent gradients affected land values (often as measured by distance from the “hot corner”), but there seemed to be a place for every stripe of retail outlet. Because traditional downtown and Main Street models so successfully capture the ideals of transit-oriented development and the transit metropolis, many planners have been tempted to simply re-create the environments of yesteryear, convinced that if they simply existed, retail activity would suddenly infuse into them, solving many of our urban congestion problems.

However, such an attitude fails to consider the degree to which retailing has evolved concurrently, and largely in response to, the automobile. Mode of access is but one of the changes that have occurred in the forty or fifty years of the automobile era. The physical form of retailing, the competitiveness and structure of the industry, and consumers’ very motivations for shopping have all transformed irreversibly during this period. To point to the traditional model of downtown development as the solution to modern sprawl is to deny to extraordinary evolutions that have occurred on both the supply and demand sides of retailing. It is true that traditional urban forms offer rich lessons in the creation of memorable, pedestrian- and transit-oriented places, but they do not address all of the contemporary challenges faced by the planners of the next transit city.
Chapter Five

Promoting Station-Area Retail Development

5.1. Introduction

This chapter will shift the focus towards questions of implementation of transit retailing by public agencies responsible for transit station-area planning and development. The experience of dozens of rail systems in North America suggests that the mere presence of a rail system in a city, or of a transit station in a particular area, does not necessarily generate spontaneous transit-oriented development. Even worse, existing land use law, zoning, development approval procedures, and government policies or subsidies can counteract the very transformations that rail transit is meant to attract. The most satisfactory station-area development results have occurred in higher-density cities were transit ridership is high, land is expensive, and existing urban patterns reinforce a transit lifestyle. Additionally, the presence of an organized and proactive station-area development program, as in Portland, OR, can be highly effective in removing barriers to development and creating a vision for a preferred solution. Furthermore, it pays to begin thinking about station-area development issues early. Larger system-level design factors, such as the placement of stations and alignments, fare policy, and feeder services can place a transit system at an immediate advantage or disadvantage for attracting good development in the future.

Good ‘station-area development’ is different from simply any development in the vicinity of a transit station. Potentially valuable projects are sometimes developed in close proximity to transit, but have serious shortcomings in architectural program, building design, or access. Retail examples include the South Hills Village Mall in Pittsburgh, separated from an LRT terminal station by thousands of park-and-ride and mall parking
spaces. Another is the Real Canadian Superstore near the Southland LRT station of Calgary Transit. In this situation, the superstore provides a valuable resource for transit shoppers, but it turns a blank façade to the station, with the entrance down a steep bluff, past dumpsters and loading docks, and on the far side of the building. These shortcomings are a particular threat in low-density cities where there are few built examples of transit-compatible environments.

It is unlikely that a transit agency will explicitly pursue a freestanding transit retail development program. However, in recognition of the value of mixed-use environments for transit patronage, the presence of existing commercial districts in station areas, and the motivations of many transit systems to induce changes in land use patterns, planning for transit retail is as vital as residential, institutional, and office planning. Successful retail development planning takes into account the needs of both retailers and shoppers, and should be included as part of any comprehensive station area planning process. Land use and design decisions made without proper consideration of retail fundamentals runs the risk of producing ‘paper’ commercial districts that are unbuildable, or if built will lie vacant.

This chapter examines methods for promoting transit retail development in transit station areas. The discussion will focus on two major areas:

- Evaluation of the retail transit market; and

- Implementation strategies to promote the fulfillment of this potential through built projects.

Recent North American experiences with transit retailing will be referenced, identifying techniques and strategies that have been used to create transit retail and other station-area development projects. The full range of design, planning, political, institutional, and
implementation issues related to transit-oriented development cannot possibly be addressed in this document. Rather, this chapter will highlight factors that are unique to transit retailing or otherwise highly influential on its success.

Application of the general strategies and techniques of this chapter to the physical, social, economic, and institutional context of a specific project can help to formulate an appropriate transit retailing strategy.

5.2. Challenges for Transit Retailing

It is useful to recall some of the challenges which transit retail initiatives may have to contend. As illustrated through prior chapters, transit retailing faces the dual challenges of 1.) retailing economic viability in a market with high automobile penetration, and 2.) creating and maintaining a commercial environment with pedestrian-oriented and use and design characteristics. More specifically, the following challenges to the viability of transit retailing must be taken into consideration by any public agency considering implementation of this idea:

- Potential incompatibility of large-scale retail venues and the pedestrian-scale of transit-oriented development;

- Possible conflicts between station-area congestion and the auto access needs of large retail centers;

- Difficulty of creating and maintaining an 'economic value of place' that make station areas attractive locations for retail development;

- Need to achieve a critical mass of retail activity system-wide so that transit riders have access to a variety of retail opportunities;
Potential difficulties in reconciling the access needs of shoppers arriving by transit, by foot, and by auto;

Need to adjust consumer shopping habits to create a transit-based constituency for transit retail;

Potential hesitance among retailer and developers to invest in unorthodox station area locations or formats;

Possible conflict between existing local zoning regulations and the physical design requirements of station-area retailing; and

Need to maintain a competitive cost structure for station-area retailers and developers.

5.3. The North American Transit Retail Experience

The overall track record of North American transit systems in accommodating contemporary retailing has been disappointing overall, through there are bright spots. On the positive side, many systems have vigorous station concession programs, integrate well with center city retail districts, and contribute to the revitalization and ongoing vitality of hundreds of transit-oriented neighborhood commercial districts, particularly in older cities. A few systems have generated innovative projects that make the seemingly impossible nexus between fixed transit and large-scale retail venues such as superstores and suburban malls.

On the down side, the majority of retail activity in American cities continues to occur in automobile-oriented suburban districts, usually served only by infrequent transit with inhospitable pedestrian surroundings. Additionally, the traditional drawbacks of
shopping by transit, including the inability to carry parcels, limitations of scheduling and routing, overall travel times, and popular perceptions, continue to fester. There is also a lack of evidence to support the transportation impact of innovative transit retail projects in reducing automobile travel to large-scale retail developments. Even worse, the traditional example of how transit can work in modern cities, Europe, is currently under siege with out-of-town retailing and hypermarkets, particularly in the U.K. and France.¹

Despite these challenges, growth management initiatives and attempts to alleviate automobile congestion have spawned a number of new rail studies and starts (particularly LRT) in lower-density cities like Salt Lake City, Tampa, Orlando, Denver, and Seattle. Portland, OR, opened the Westside extension to its successful MAX LRT in 1998. Because the existing urban surroundings (e.g., density and land use) in these light rail corridors are not particularly conducive to transit, and because of the development of the transit-oriented design literature in the 1990s, this generation of light rail projects generally has taken a more hands-on approach to station-area planning and development. Portland and Seattle, WA, for instance, both staff ‘transit-oriented development coordinators,’ and the planning for the Florida systems include explicit land use interventions to accompany the rail projects when they are constructed.² Portland, OR, has constructed hundreds of units of residential space, as well as thousands of square feet of office and retail, in its very-aggressive retail development program.³

¹ See Burtenshaw, et. al. (1991), for an overview of the impacts of retail evolution on urban planning in Europe. See Pucher (1999) for a review of transit performance in Europe.
5.3.1. Key North American Transit Retail Projects

To date, there have been no formal studies providing an inventory evaluation of transit retail projects in North America. Unfortunately, there is also a lack of information on the empirical mode share performance of projects co-located with transit stations. Retailers and property managers may possess this information, but consider it proprietary because it can reveal strategic information about their target market. Nonetheless, one can find examples of almost every type of retail development located in the vicinity of rail transit stations. One might mistakenly conclude that if these projects have been built *somewhere*, then retailers can build these formats anywhere.

While retailers are increasingly exploring non-traditional store formats to expand into non-traditional markets, there is often an economic, regulatory, or political motivation encouraging this approach. Recall from Chapter Three that deviations from traditional practice can increase the risks and costs associated with a project, particularly when it involves restriction on automobile access. For example, local resistance to superstores, high land prices, and an affluent local market can change the cost and risk equations of developers in ways that are not applicable in the majority of development situations. Perhaps, as consumer and developers' experience with TOD formats grows, the ‘risk premium’ of transit retailing will diminish so that the idea gains greater general acceptability.

In theory, any type of retail development can locate in a transit station area under the right conditions. The Metrotown project in Vancouver, B.C. situates a 250-store enclosed mall and mixed-use development adjacent to a SkyTrain station. Similarly, Lloyd Center in Portland, Oregon fits 1.5 million square feet of maill retail space, as well as a large, walkable, retail “strip” within an easy stroll of a MAX light rail station. In Miami, Florida, the Dadeland Station power center includes 350,000 square feet of big-box retail development on three levels. Supermarkets and neighborhood retail is
common in many station areas, such as the newly-renovated Porter Square shopping center in Cambridge, MA. Smaller retailers are even more ubiquitous in the form of corner stores, newsstands, kiosks, and pushcarts near transit systems everywhere.

The common ingredient is a clear understanding of the market potential of each station. Smaller neighborhoods may have a 'captive' convenience market that would go unserved if not for small business retailers who fill the niche. In central cities, the cost of land and the favorable modal split can inspire Vancouver- and Portland-style shopping malls in very compact settings (in spite of the higher development costs). The Dadeland superstore project is the product of a very affluent market, a scarcity of land serving that market, an adjacent, thriving enclosed mall, and a favorable joint development agreement with the Metro-Dade Transit Authority. Unconventional models of development pose special risks—in Miami, tenants worried about parking garage security, visibility, and adequate parking. However, proper assessments of opportunity and risk can yield very satisfying commercial results (at Dadeland, all superstore tenants have vastly exceeded their sales projections).  

In summary, a number of retail projects in station areas have pioneered increased retail densities, using multi-floor formats, stacked parking, quality pedestrian access and streetscapes, direct connectivity to station areas, and the adaptation of auto-oriented retailers to multi-modal environments. Even mass- and chain-retailers have demonstrated a capability to adapt to unconventional urban locations if there is a sufficient market inducement to do so. Clearly these projects elevate retail accessibility for patrons who are already riding transit or are dependent on it. It remains unclear, however, the degree of success that these projects have had at increasing the modal share of transit for retail trips.

4 Urban Land Institute, Dadeland Station Project Profile (1998).
5.3.2. Implementation Strategies

Implementation strategies for transit development have focused on making the process less onerous for developers, clarifying the vision of the desired outcomes, and aligning public and private resources to achieve those outcomes. These strategies aim to improve the competitiveness of station-area development sites relative to other locations. Typical focus areas for retail development strategies include:

- Formation of Interagency, Inter-jurisdictional, and Public/Private Development Alliances;
- Master Planning and Visioning for Station Areas;
- Revision of Zoning and Regulations to Support TOD;
- Streamlining and Clarifying Development Approval Processes; and
- Creation of Incentives Programs to Bridge Financial Gaps;

More specific examples of these tactics are examined later in this chapter. The net effect of these strategies is to lower barriers to TOD development, educate the private sector about TOD opportunities and desires, and instill confidence among developers that TOD is a win-win proposition. Markus paraphrases the message that the City of Portland tried to put forward to developers:

\begin{quote}
The city wants TOD, there is a market, and we have done our homework.
Building TOD will save you time and money and reduce your risk.
The city’s TOD strategy provides flexibility and certainty.
The city is ready to work with you.\footnote{Markus (1999).}
\end{quote}
5.4. Understanding the Transit Retail Market

5.4.1. System-Level Evaluations

In order for the public sector to sell the private sector on transit retailing, they themselves must have at least a rudimentary understanding of the commercial opportunities generated by the transit system. Commissioning a marketing study for an entire transit corridor or key station areas could provide a wealth of information to guide the planning and development of the system and the surrounding development. Information of relevance to transit retailing includes: the location of competitors for various industry segments; the demographics and magnitude of the transit; key station-area properties with commercial potential; traffic flows (by all modes) through station areas; and any special station area assets and features of interest to commercial developers. This information can then be used to determine the retail opportunities in specific station areas. Naturally, such a marketing study could be used to reinforce other elements of the station-area planning process, including the market for other land uses and the optimum combination and scale of development in particular station areas.

If these market investigations begin early enough in the planning process, the information may be used to help determine the alignment of the system. For example, is it worth the extra expense (in terms of ridership and development potential) to penetrate the heart of a major activity center to increase the development impact of the system, versus a lower-cost bypass?

With such information in hand, a planning agency is better equipped to pursue comprehensive planning of station areas in both existing business districts and in areas with no existing commercial precedent. The station area visions will have greater consistency with the needs and desires of the private market, and areas with the highest
retail potential can be identified, zoned appropriately, and pursued aggressively for development. Furthermore, the agency is better prepared to respond to inquiries about possible development in station areas if it has taken the time to study these questions in depth.

5.4.2. Evaluation of Station Area Opportunities

Each station area possesses a unique combination of factors that shape its development potential, including its scale and the land uses involved. For transit retailing, it is necessary to identify sites that, of their own merits, have desirable characteristics for commercial development. Attempts to zone or develop retail projects on sites with inherent competitive disadvantages cannot succeed.

It may be prudent to commission real estate development and market analyses for station areas with a specialist having experience in transit and retail development. These studies would determine the ‘highest and best uses’ for station area parcels, ensuring that the full development potential of station areas is known. The magnitude of retail developments, as well as other potential uses for the land, may be identified and compared in an authoritative manner. Furthermore, most planning agencies do not have the information or expertise to perform competitive assessments of the retail market, including the impacts of nearby competition on retail potential and the demand (or lack thereof) for new retail space of a particular sort.
In evaluating station areas, the following general qualities should be taken into consideration:

- **Site and Station Visibility;**
- **Potential Customer Flows (Transit, On Foot, and Auto);**
- **Overall Urban Context;**
- **Availability of Development Sites; and**
- **Surrounding Retail Competitive Environment**

**Site and Station Visibility:** Retail development requires locations where customers (or potential customers) can see it. Clearly, not all parcels in all station areas possess similar levels of visibility. The physical design of transit stations, station-area public space, and structures can influence the level of visibility of a site, but in general, the more ‘eyes’ that can see a potential retail site, the better. This is of course a function of traffic flows, as discussed below.

**Potential Customer Flows:** The value of commercial properties is highly influenced by traffic flows passing by, and thus station area parcels exposed to high volumes of passing traffic will be the most promising locations for retail development.

The type of traffic, pedestrian or automobile, depends on the type of retailing desired. In general, greater amounts of automobile traffic will support larger scales of retail development than flows of pedestrians or transit riders alone. (An exception is in locations with extremely high pedestrian traffic and where automobile access is difficult, as in large central business districts). Sites with high pedestrian and automobile access are the best for larger-scale developments, so long as the accessibility of one mode does not preclude the accessibility of the other mode. High peaking of traffic flows (as near employment centers) generally reduces retail potential, though this problem can be self-
correcting for larger retailers which are destinations in themselves as opposed to convenience or trip-chaining stopovers.

On the other hand, smaller-scale retail developments focused primarily at transit riders and pedestrian flows may rely very little on auto access, requiring only a minimum volume of ‘past the glass’ pedestrians. Yeates and Jones have estimated the pedestrian flows required to support convenience retailers in rapid transit and commuter rail stations in Toronto. They found that a minimum daily passenger flow of 6,600 persons is needed to support convenience retailers such as newsstands and coffee shops. They also observe that the greatest concentrations of transit-focused convenience retail exists at major interchange stations and stations near major office buildings. Concentration of pedestrian flows may enhance the viability of concessions in station areas with marginal pedestrian flows.

**Urban Context:** The current or future surroundings of the station still strongly influence retail potential. Here it is important to integrate transit retail analysis into a broader vision for station-area development, whether it is neighborhood revitalization, stabilization, or the creation of a totally new transit-focused district. Under the proper circumstances retail development could form and anchor of station area development plans, but only if plans are sensitive to the competitive and development needs of the retailer(s). For example, some New Urbanist master-planned developments have suffered from a ‘hole-in-the-doughnut’ problem in their designated commercial areas, because retail development cannot be supported until community build-out occurs, perhaps ten years after the first phase is completed. In a study of transit-oriented development in San Diego since 1981, Boarnet and Compin (1999) concluded that the emergence of new station area development is likely to be a very slow process, limited by the increment of new growth that can be absorbed in a given area.
Existing commercial districts are obvious candidates for new transit development or renewal, but the impacts of new development must be weighed against efforts to revitalize existing businesses. Large trip attractors may generate high flows at certain times, creating concession opportunities. Stations which are relatively isolated from their surroundings due to existing development patterns, major highways, geographic features, etc. may not be good locations for new neighborhood centers, but the relative isolation may provide an opportunity to bring a relatively large retail development (e.g., Cineplex or superstore) within reach of the transit line without negatively affecting surrounding neighborhoods or upsetting the pedestrian scale of other station areas.

**Availability of Development Sites:** The size and nature of potential development sites possessing other desirable characteristics will also define the development possibilities. Some stations provide only opportunities for small infill projects, while others offer larger, contiguous brownfield or greenfield lands without an existing urban context. Naturally, the scale of retail development proposed in a station must correspond to available development parcels. Ownership is another consideration. Fragmented land ownership in built-up areas may complicate the development of large-scale projects, and sensitivity to existing urban scale may make this time of development undesirable. Public ownership of other parcels by municipalities or transit authorities (such as those used for construction staging) produce joint-development opportunities, provided the legal structure of the agencies involves permit joint development.

**Surrounding Retail Environment:** Assessment of the retail competitive situation affecting station areas varies by the type and scale of development proposed, and is perhaps best left to the retail developers themselves. A retail marketing study can provide insight into the general retail characteristics of an area, perhaps suggesting classifications of retail development that may fare better or worse in light of surrounding development. For example, a new community retail node may not be viable if a nearby, highly-traveled roadway already provides these types of services. One approach to this problem with
publicly-owned land (if an agency is empowered to pursue joint development) is to request development proposals for commercial or mixed-use projects, and let the creativity and market savvy of the private sector do the investigation.

5.4. Station-Area Planning and Visioning

An important prerequisite to a comprehensive station area development program is a master planning vision of each station area in the near and long term. Without such a blueprint for development, station areas sites risk falling prey to inappropriate land uses or development which is not designed in a transit supportive way. Moreover, it is difficult to operate a transit-oriented development program without a clear vision for the final desired outcome. The station area plans need not spell out the design of the area in exacting detail (which would not likely be realized in any case). It should include a clear zoning vision specifying the permitted uses in each parcel, as well as transit-oriented design guidelines to insure that development adheres to the pedestrian spirit of the station area. In addition, the findings of any marketing studies should be reflected in the plan.

The prudent retailer and real estate developer wishes to understand as much as possible about the market area that their venues are serving. As has been discussed in Chapter 3, the novelty of station-area development poses a unique set of risks and uncertainties. This risk can be reduced to some degree if the public sector develops, through a public process involving all stakeholders. For the retailer and developer, this vision can help determine the potential market area, the character of the area at build-out, and the type of development that is desirable and appropriate for a given station area.

It is important to note that, in light of the many feedback relationships between transit infrastructure, land use, and the commercial potential of a particular parcel, it would be very prudent to include members of the development community in the visioning process, so that the station master plan identifies the most appropriate and commercially viable
parcels for retail or mixed-use development at the outset. This involvement will also pay dividends by generating developer interest in station-area parcels and by building public-private relationships at an early stage.

To the extent that is possible, an implementation strategy for the station-area vision should also be developed. However, an agency must be cautious not to present an overly-specific strategy that provides a false sense of predictability, which may undermine the credibility of the plan.

A good example of a station-area visioning process is that which is being developed for the Clackamas Town Center area in Clackamas County, Oregon, south of Portland. The approximately 3.5 square mile area is one of 9 designated regional activity centers within the Portland Urban Growth Boundary (UGB). In addition, it is the planned southern terminus for the North-South Line of the Portland MAX light rail system, now under undergoing environmental impact review. The Clackamas Regional Center Area Plan, developed by the Clackamas County Department of Transportation and Planning, includes a comprehensive review of needed transportation improvements, with an emphasis on making the automobile-dominated commercial area increasingly multi-modal. Improvements include pedestrian and streetscape improvements, a bicycle network, bus improvements, roadway improvements, and planning for the new light rail terminus. The plan also includes a complimentary retail rezoning program, including the densification of the existing Clackamas Town Center Mall (by building outparcel structures on surface lots, which will be converted to stacked garages), and through desnsification and reorientation of buildings on adjacent highway strips. The revised zoning, physical improvements, and transit investments, coupled with the region's famous growth control measures, are designed to provide a clear long-term growth vision for a conventional sprawling suburban center.
5.5. Marketing Transit Development

Station-area developments are often disadvantaged simply because of a lack of prevailing knowledge about development opportunities within the development community. If an aggressive land use development policy has been developed by an agency, it is critical to disseminate this information as thoroughly as possible to interested parties. Some transit authorities have begun to distribute information to interested parties. As most rail projects feature extensive mapping/rendering efforts and literature development programs for general information and public review purposes, a rudimentary document aimed specifically at land developers could be produced at a relatively low marginal cost. Appendix B contains sample development informational materials from several TOD and urban development initiatives from around the United States.

In Greater St. Louis, the St. Clair County (IL) Transit District has developed a brief brochure describing market and development opportunities for the planned MetroLink light rail extension eastward from E. St. Louis, IL. The brochure provides brief descriptions of existing characteristics of each station and a schematic illustration of the planned zoning for each station, including various types of retail development. It also includes a short system overview and contact information to obtain further information about specific station area opportunities. Dallas Area Rapid Transit (DART) has produced a similar document for its 20-mile light rail system and 10-mile commuter rail line. It includes demographic information and station characteristics, but does not identify long-range station area plans or zoning information.

The Central Florida Regional Transportation Authority has commissioned very detailed urban design plans and design guidelines for its planned LYNX light rail system in Orlando, Florida. These documents provide a clear visual communication of transit-oriented design concepts and objectives for the 20-station, 17-mile system, as envisioned by the long-range land use plan.
Chapter Five: 
Promoting Transit Retailing

A number of very interesting planning tools are emerging from the downtown CBD revitalization movement which has tremendous momentum in many cities across North America. One such tool is the Retail Chicago program of the City of Chicago Department of Planning and Development. The program collects data on City neighborhoods to identify retail markets, inventories land and assists with land assembly, streamlines development approvals, and offers incentives to promote new development. Retail Chicago disseminates this information to interested investors including demographics, transportation access, representative retailers, and special area assets. (See Appendix B).

5.6. Promoting Effective Public-Private Cooperation

In the opinions of many developers, public agencies and public development approval processes are exceedingly bureaucratic, difficult, and lacking in clarity, prompting many developers to avoid development opportunities requiring extensive interaction with public regulatory agencies (unless the anticipated project return on capital is suitably attractive). Prevailing attitudes among private developers, often substantiated in fact, can pose a significant risk to the success of a station-area development program. Station-area development requires by its nature deliberate public intervention to create a pedestrian-accessible realm (according to a station area plan and/or design guidelines) which is consistent with a public vision for the area. Subjective evaluation of design elements such as streetscape, façade articulation, parking provision, etc., can frustrate developers who cannot be sure up front of exactly what the public sector requires for approval.

At the heart of any successful station-area development program, for housing, employment, retailing, or any other use, must be a mutual public and private willingness to cooperate to achieve mutual objectives. Since private capital is mobile throughout the
region, it is the public sector that must step forward first and profess its willingness to cooperate with the private sector to promote station-area development in an expedient, transparent, and predictable fashion. The goals of the public sector, as well as the regulatory requirements (and incentives) for developers, should be well-publicized and unambiguous.

A few cities, including Portland, OR, Seattle, WA, Tampa, FL, and Orlando, FL have introduced a Transit-Oriented Development Implementation Coordinator to the staffs of transportation planning teams for light rail systems in low-density cities, where substantial land use transformations are required to build a transit-accessible urban fabric. This staff person can coordinate station-area land use planning efforts and acts as a champion and focal point for such activity. In addition, a TOD Coordinator has information, expertise, and resources available, and is an ideal person to make informational presentations and handle development inquiries. The TOD Coordinator can act as the primary contact person for with the private sector during projects.

5.7. Provision of Development Incentives

In general, though, the problem of station-area retailing is one of diminishing the additional development burdens inherent in these more regulated environments. Recall from Chapter Three that the primary obstacles to retail development in station areas are the increased risk and uncertainty posed by difficult development sites and the unconventional formats required in station areas. There is also an uncertainty about the inherent value of locating in proximity to transit, such as the customer market represented by the system, the profile of the average user, the willingness of consumers to use transit for shopping, and potential negative characteristics that may detract from the value of the property (e.g., crime of congestion).
Whether they are real or perceived difficulties, all of these factors are legitimate concerns, because they have the potential to undermine station-area development efforts. The public sector can play an important role in alleviating these concerns and reassuring developers, retailers, and lenders of the legitimate aims and benefits of station-area development. This can be as simple as provision of information to very ambitious loan-backing or financial incentive schemes. The particular strategy must depend on the circumstances of a given project and the political, legal, institutional, and economic framework of the project overall.

Revisiting the likely complications of the development process identified in Table 3-2, Table 5-1 suggests public-sector strategies for overcoming or reducing these development obstacles. They are also discussed in through the remainder of this section.

- **Vision:** A lack of awareness of the potential and advantages of station-area development within the development community;

The public sector can encourage interest in station areas by distributing information, establishing contacts with the development community, and providing adequate staffing levels to respond promptly and effectively to developer inquiries. The public sector can also assist by refining and publicizing its own vision of station area development in the near and long terms.

- **Site Selection and Evaluation:** Station development areas may not be perceived as the best development sites according to prevailing evaluation metrics;

Information can be provided to developers about available land parcels and areas that the public sector wished to see developed in an expedient manner. Projecting a ‘can-do’ attitude to developers may go a long way in advertising that the public sector is ready to do business.
<table>
<thead>
<tr>
<th>Development Phase</th>
<th>Major Developer Considerations</th>
<th>Likely Actions to Avert Risk</th>
<th>Possible TOD Complications</th>
<th>Public-Sector Inducement Tactics</th>
</tr>
</thead>
</table>
| 1. Visioning      | Create a competitive project that attracts retailers and investors, maximizing the return on investment. | Cater to the needs of reliable and desirable tenants, such as national chains retailers. | -Concept unfamiliarity
- Lack of TOD Experience
- No existing retail market | -Establish TOD Liaison to promote station-area dev.
- Establish clear station visions
- Seek experienced TOD devs. |
| 2. Site Selection | Choose site with competitive advantages (visibility, low cost, etc.) and low development cost. | Select urban fringe sites with good customer access but few encumbrances. | -Lack of information on available land parcels
- Perceptions of risk and tedium of TOD dev. Process | -Distribute information on TOD development opportunities
- Adopt development-friendly attitude, streamline approvals |
| 3. Land Acquisition | Acquire land as quickly as possible without complications or prolonged negotiations. | Avoid site assembly or parcels with possible contamination. Land bank agricultural or undeveloped land if possible. | -Fractured land ownership
- Land encumbrances
- Complications/effort to acquire public-owned or joint-development parcels | -Pre-assemble or pre-clear key development parcels
- Streamline joint development procedures
- Leverage small busins.progs |
| 4. Schematic Design and Approval | Adopt design formats that are appeal to tenants and lenders, and avoid prolonged delay in permitting and approval. | Avoid unorthodox designs or sites which require special public approvals or design reviews. | -Ambiguous or complicated regulations and approvals
- Time delays from lengthy TOD permits and reviews | -Make regulations and developer requirements clear and unambiguous.
- Provide apprvl proc assistance |
| 5. Costing | Control development costs so that space can lease at a competitive rate and the return on investment is maximized. | Avoid unnecessary costs items, amenities, or design features that cannot be passed on through rents and sales margins. | -Cost implications of public amenities, lengthy approval, TOD land prices, stacked parking, difficult or unique site designs. | -Offset higher costs with real or in-kind public incentives (tax abatements, land donations, infrastructure improvements, etc.) |
| 6. Raising Equity | Attract enough investor equity to satisfy the needs of financial lenders. | Avoid unorthodox formats that raise the ratio of equity to debt. | -Lender wariness about TOD location, parking ratio
- Lack of TOD benchmarks | -Use public subsidies to meet higher TOD equity requirements |
| 7. Financing | Secure financing quickly, with the most advantageous interest rate and terms. | Satisfy investors that project is not overly risky by adopting 'proven' retail development techniques. | -Lender wariness about TOD location, parking ratio
- Lack of TOD benchmarks | -Provide loan guarantees for key projects, or subsidize interest rates |
| 8. Construction | Build the project at the lowest possible cost, on time and on budget. | Avoid conditions that can raise construction costs such as constrained sites or unknown subsurface conditions. Avoid parcels that require demolition or environmental abatement. | -Crammed on-site construction conditions
- Higher costs of constructing novel designs. | -Make up for increased construction costs by reducing other 'soft costs' or lending costs of the development |
| 9. Marketing | Provide an attractive project that attracts both tenants and retailers. | Adopt formats that retailers and customers are known to favor. | -Difficult marketing in districts with fragmented ownership. | -From BIDs for holistic management of TODs.
- Use 'showcase' projects |

Table 5-1. Public-Sector Tactics to Reduce Station-Area Development Risk.
Chapter Five:
Promoting Transit Retailing

- **Land Acquisition**: Difficulties in acquiring or assembling land due to fractured ownership, environmental degradation, or lengthy public disposition processes;

The public sector can assist by pre-assembling land parcels, by making resources available to detect and mitigate any brownfield environmental hazards, and by developing expedient processes for disposing of surplus public lands.

- **Schematic Design and Approval**: Public approval criteria may be vague, or the public approval process may add additional development time to the project, placing it at a competitive disadvantage with other sites around the city.

Planning departments can work to streamline development approval processes, provide maximum guaranteed periods until a decision is made, and increasing the clarity of regulation intentions and developer requirements.

- **Costing**: The cumulative effect of development risks and delays, longer public approval processes, and more costly dense construction methods may result in a project with a higher cost structure as compared with similar projects that are not located in transit stations.

Public development incentives such as tax increment financing, favorable public land leases, development approval assistance, provision of infrastructure, or numerous other cost-saving measures can reduce the additional cost burdens that may be associated with difficult station area infill parcels.

- **Raising Equity and Financing**: Station-area projects may have a higher cost of capital relative to similar projects elsewhere due to perceived risk and design novelty.
Planning departments may provide financing guarantees, low-interests loans, or other public assistance to raise additional equity or otherwise satiate lenders and equity partners.

- **Marketing the Project:** It may be more difficult to attract and retain retail tenants in a station area if it deviates significantly from what is known to 'work' in a particular market area or industry segment.

The more information that developers can collect about the transit system and its market potential, the easier it will be to market transit-oriented parcels. It is also important to develop projects with high probabilities for success early in the process to promote developer, investor, lender, and tenant confidence in the concept, especially where it is new and unfamiliar. Business Improvement Districts may also help to create a favorable image for the center.

### 5.8. Conclusions

The attitudes and preparedness of the public sector to intervene in the development process are critical components of any station-area development program. In addition, the public sector must have a clear and credible vision for station areas and for the retail function of the system overall, and planners must be willing to advocate to developers on behalf of this vision.

The public sector must also define a strategy for implementing the station-area vision, especially surmounting the formidable development barriers that may be encountered when station-area projects are first introduced. During the transition phase, public incentives may be required to overcome developer and investor wariness, and to produce a circumstance of cost parity with development sites on less encumbered land parcels. It
is critical that early projects are chosen because of their strong retail potential and their likelihood for success, so the transit-oriented development concept emerges with a positive start that attracts the interest of the development community.

Sustained, large-scale station-area development requires an understanding of transit as part of a retail system, and the resources and qualifications within the public sector to evaluate retail development opportunities as they arise. Sufficient market research is necessary to understand the retail market represented by the transit system and the development merits of individual parcels. In addition to these general, pro-development attitudes, projects and station areas must be evaluated on a case-by-case basis to determine their idiosyncratic merits. Such an analysis will be performed in the following chapter.

5.3. Conclusion

The two critical elements of a transit retailing project are understanding the transit retail market, both in terms of system characteristics and land development opportunities, and also to prepare public-sector agencies and governments to implement transit retailing projects by creating TOD-friendly policies and practices. The Portland, OR approach of highly-integrated local governments appears to have produced the largest quantity of TOD projects, and perhaps the most successful. Pooling of government strengths and resources overcomes institutional barriers to transit-oriented development that may raise development costs and uncertainties for the private sector.

Evaluating the transit market is necessarily idiosyncratic. As with any other development site, the commercial potential of transit stations is unique, requiring an evaluation the development conditions in each. Furthermore, each station-area development effort must contend within local political, institutional, and jurisdictional context in which it takes place. The most effective station-area development efforts occur where there is
cooperation among stakeholder agencies and groups to make transit-oriented
development as easy, if not easier, than development in other locations. Given the
complicated design and regulations that carefully-planned station-areas require, this is not
an easy task.

Recalling Table 3-1 from Chapter 3, each step of the retail development process also
poses potential difficulties for station-area development. In general, the uncertainty and
unconventional nature of station-area retail development increases risks for both
developers and retail tenants. There may be increased development costs on station-area
parcels, especially complicated infill parcels, as compared with suburban or greenfield
sites.

It is realistic to expect that, in the absence of compelling market forces driving private
development in station areas, the public sector may have to ‘close the financial gap’ in
order to realize some transit retail projects. Particularly in the early days of transit-
oriented development, there may be few reasons for developers to be attracted to station
area locations as opposed to other locations. The public sector can assist by sponsoring
showcase joint development projects, walking through the initial projects to identify
snags in the approval process and hopefully demonstrate the viability of TOD to the rest
of the development community.

It is important to emphasize that it is impossible to create successful station area retail
development where there is no natural market. This underscores the importance of
studying the commercial market before commencing in engaged land use planning and
zoning. Furthermore, up-front market analysis in the planning and design phases of a
system can maximize the development opportunities downstream.
Transit retailing raises complicated questions about the extent of public-sector planning and transportation involvement that is appropriate in station areas. Some may object to the use of public funds to ‘subsidize’ transit-oriented development; others may construe the need for subsidies as ‘proof’ that the public sector is meddling in markets to promote non-competitive and unwanted forms of commercial development. A counter to these claims is that intervention is required to generate a ‘critical mass’ of development, building a transit constituency until travelers and development naturally gravitate to the transit system. This in turn reinforces the public investment in transit, providing benefits through reduced congestion, improve accessibility, and lower environmental costs.

While some innovative transit retail projects and programs have been implemented in North American transit systems, the impacts of these projects as alternatives to traditional retail sprawl have not been documented or analyzed. Presently, planners operate without empirical evidence to support the claim that transit retailing or TOD will ‘catch on’ after an initial incubation period of subsidy. Nor is it clear what amount of development will build a ‘critical mass’ of transit ridership. Furthermore, there is no evidence to suggest that transit-focused retail development will provide the transportation advantages claimed, or that it is more efficient than current development patterns, or that it will improve the welfare of consumers, retailers, and the general public. Until these issues are researched and clarified, implementers of transit-oriented development and retailing will not have the advantages of rigorous research to refute skeptics of the idea.
This Page Intentionally Left Blank.
Part II:
Transit Retailing in San Juan

Chapter Six:
Overview of Transit and Retailing in San Juan

Chapter Seven:
The Retail Potential of Tren Urbano

Chapter Eight:
Institutional and Policy Context of Tren Urbano

Chapter Nine:
A Transit Retail Development Strategy for Tren Urbano

Chapter Ten:
Conclusions: Prospects for Transit Retailing
Chapter Six
Overview of Transit and Retailing in San Juan

6.1. Introduction

Discussions of transit retailing thus far have illustrated the idiosyncratic nature of the process, highly dependent on the peculiarities of a particular situation—the participants, the land parcel(s) involved, timing, market conditions, policies, etc. Additionally, the factors influencing spatial patterns of retail development and consumer travel behavior evolve uniquely in different metropolitan areas. Thus the prescriptions for encouraging station-area retailing which work in one location may be partially or wholly inappropriate in another location. At this time, too few innovative, large-scale retail projects have been undertaken to perform a controlled, systematic study of policy or economic conditions leading to their success or failure, and in any case, generalization across cities is only of limited use to a particular transit agency grappling with the challenges of transit retail development.

Examples from North American cities that have tried to promote transit retail development have suggested that, under the right conditions, major deviations from prevailing retail trends and assumptions are possible. Big-box retailers stack vertically, city and neighborhood centers revive, and national retailers abandon formula developments for more context-sensitive architecture and access. On a broad-brush level, one might be falsely led to believe that if these types of projects can be built somewhere, then they can be built anywhere. This is clearly an oversimplification of the retail development process. It is worth noting that no North American city has excelled in all aspects of the transit-accessible metropolis, especially in the retail sector.
Therefore, to develop a transit retail implementation strategy for Tren Urbano and San Juan, it is necessary to look more closely at the particulars of transit, land development policy, and retail activity in that city. The remaining chapters of this document will attempt to ground the concepts introduced in the first five chapters by discussing them in the San Juan context, resulting in an implementation strategy tailored to that environment. The long-range planning activities required to fulfill this objective are just beginning in earnest, and planners will soon be faced with the question of how to initiate this massive transfiguration of San Juan’s urban environment.

Transit-oriented commercial districts are important to the long-term success of Tren Urbano for a number of reasons. First, the presence of shopping opportunities along the alignment (especially at transfer locations) increases the convenience of system for ‘trip-chaining’ work commuters. Second, diversifying station-area land uses provides greater accessibility for transit-dependent populations, including those who cannot afford an automobile, as well as those who choose not to rely solely on their automobile. This is crucial if transit is to realistically provide an alternative to the automobile dependence outside of its traditional work commuting niches. Third, mixed station areas promote off-peak ridership outside of the usual heavy peak-hour commuting flows. Fourth, the presence of commercial uses in station areas aids the creation of lively public activity centers that are oriented towards transit. This activity will increase the visibility and stature of the transit station in the community, while ensuring that the station area remains vibrant and safe for the majority of the day.

Experiences in rail starts in other North American cities has suggested that planning and policy guidance is required to produce desirable station-area development outcomes. Non-interventionist approaches have failed to generate the desired land use and urban design transformations. Even worse, without a station-area development strategy, it is not possible to prevent the construction of inappropriate projects that are incompatible with transit. In low-density San Juan, the need for a conscientious station-area planning
effort is very great, since the basic infrastructure of the city offers so little support for pedestrian and transit access to station areas and surrounding destinations. A station-area development program should be a natural extension of the public investment in the transit infrastructure.

6.2. Organization of Part II

The task of creating a transit retail development strategy for Tren Urbano begins with an overview of the project, its urban context, and the retail competitive landscape of the SJMA. These items will be explored in the remainder of Chapter Six. Chapter Seven investigates the retail potential of Tren Urbano, in terms of system design and the physical, economic, and social attributes of specific transit stations. Next, Chapter Eight places these development opportunities in the institutional and policy context of the Tren Urbano project. Chapter Nine suggests a comprehensive retail development strategy for San Juan, including short- and long-term development objectives. Finally, Chapter Ten will reflect on the findings of this study and suggest opportunities for further research.

6.3 Overview of San Juan and Tren Urbano

The San Juan Metropolitan Area contains 1.3 million residents in 13 municipalities, approximately 37% of Puerto Rico’s entire population. Rapid population growth is anticipated to increase the population of the SJMA by 20% to 1.55 million in 2010. Due to rising personal incomes and an explosion in automobile growth over the last 4 to 5 decades, the SJMA has expanded enormously in physical size and traffic congestion. The island currently has approximately 146 vehicles per mile of paved road, and in the SJMA alone there are more than 3.2 million vehicle trips per day. This is expected to increase 45% by 2010, over twice the rate of population growth.1

1 Javier Mirandez, Tren Urbano Office, 5 October 1998.
Figure 6-1. Tren Urbano Phase I and IA Alignment.
While the initial expansion of the metropolitan area was fostered by a network of streetcar lines, these services disappeared in the 1940s, due to disinvestments and competition from the automobile. For nearly 30 years, transportation officials in Puerto Rico have discussed the construction of a new rail rapid transit system to accommodate San Juan’s rapid growth. Planning for Tren Urbano began in earnest in the early 1990s, with Phase I groundbreaking occurring in 1997.

Figure 6-1 shows the 17-km Phase I alignment of Tren Urbano. Phase I runs from Sagrado Corazón station in San Juan Municipality’s Santurce district, south through the ‘Golden Mile’ business district of Hato Rey, and to the historic core of Rio Piedras, a dense urban center of low-rise buildings and a hub of transit in San Juan. The alignment then turns westward, running past Centro Medico, the city’s main hospital complex, and through suburban districts via the corridor of the planned 65th Infantry Highway which was never constructed. The alignment leaves San Juan Municipality, quickly traverses suburban Guyanabo, and terminates on the edge of the historic town center of Bayamón, an edge city and another major transit hub in the city. At build-out (Figure 6-2), the Tren Urbano system is anticipated to extend from Bayamón to Carolina, Old San Juan to Caguas, providing rapid transit trunk lines to a large portion of the metropolitan area.

Presently transit services are provided by the Autoridad Metropolitana de Autobuses (AMA), which operates a fleet of approximately 200 buses throughout the metropolitan area. There are also two contracted express bus services, Metrobus I and Metrobus II, running through the Golden Mile and Avenida Roosevelt corridors, respectively. Furthermore, a large owner-operated fleet of vans and mini-buses, known as públicos, operate an extensive system on designated routes in the SJMA. This less formalized transit system carries the majority of transit passengers in the city, yet suffers seriously from aging vehicle fleets and operators and poor quality of service and safety.
Figure 6-2. Tren Urbano Five-Phase Build-Out Plan.
Because of these factors, públicos are used mainly by low-income transit dependents with no practical or affordable alternatives.

The bus system and públicos are seen as key feeder systems for Tren Urbano, and AMA routings will be modified when the system opens to service its stations. Integration with the públicos will be considerably more difficult, given the fracture ownership in the organization, its cash-only operations, lack of scheduling, and the competition and redundancy between the train and some key publico routes. Among the outstanding issues of service integration are schedule coordination, route determination, and fare integration.

6.4. Physical and Competitive Landscape of the San Juan Retail Sector

6.4.1. Introduction

There is presently a sweeping transformation occurring in the Puerto Rico retail sector, as the island’s more traditional, small-business retail venues are being challenged by the influx of larger and more sophisticated national retailers. Concurrent with this transformation is a boom in shopping center development, situated mostly on arterial roadways on the fringes of the metropolitan area. Still, the retail sector remains very diversified, with a combination of large and small vendors serving different geographic and demographic segments of San Juan’s population, in both historical town cores and retail strips along highway corridors.

6.4.2. History of Retail Development
The evolution of retailing in San Juan is closely tied to the overall physical and economic development and settlement patterns of the region. For many years, Old San Juan served as the primary commercial area of the city through small proprietorships and traditional markets. The outward development of the city along the Santurce trolley lines slowly drained commercial energy from Old San Juan, spawning the development along Ponce de León Avenue. In both locations, the physical form of the city was relatively compact, catering to customers who walk from surrounding neighborhoods or rode the trolley line to access more specialized goods. This urban development pattern was very hierarchical, with a range of centers with different levels of geographic catchment and sophistication of goods. San Juan's premier department store, Gonzalez Padín, opened in the early 1920s in Old San Juan, and was the premier department store for the entire region. (This store eventually fell victim to shopping center competition, closing its doors in the early 1990s. The site now contains a Marshalls off-price discount chain store.) Small commercial uses, such as corner markets, tailor shops, and restaurants, were interwoven into residential areas of these older segments of the city (and in large measure still are), serving very localized populations with basic everyday goods and services. Other town centers, such as Bayamón, Rio Piedras, and Cataño, also thrived as centralized nodes of local trade, given their concentrations of population and transportation access. Into the mid-twentieth century, this transit and walking-based commercial structure was the basis of retailing in the city.²

From the mid- to late-twentieth century, the increasing economic development of the island led to a rise in personal incomes and increased ownership of automobiles by the middle class. The flight of capital from Cuba following the 1959 Revolution hastened the development of San Juan as the principal commercial center of the Caribbean. Additionally, an aggressive program of highway building created spines of inner-city expressways and widened urban arterial streets. Increased automobility led to the spatial

² Interview with Aníbal Sepúlveda, UPR, 14 January 2000.
dispersion of the population into formerly rural portions of southern San Juan and its flanking suburbs.

The new visibility and high accessibility of land located along major automobile routes suddenly made these land parcels very attractive for commercial development, especially since the more affluent segments of the population increasing conducted their shopping activity by automobile. The 1956 general municipal plan for San Juan was the first to envision the creation of Plaza Las Americas, Plaza Carolina, and the El Mundo shopping malls. Many former residences (if they were not demolished by road building and widening), were converted to commercial uses, while other new commercial structures form a type of low-intensity strip development along major thoroughfares. These developments still featured sidewalks and moderate accommodations for pedestrian access to the neighborhoods. However, the lack of adequate parking led many motorists to park on these sidewalks, blocking them to pedestrians. Additionally, street widening and heavy traffic volumes coupled with general neglect by automobile minded public works officials, led to the gradual deterioration of the pedestrian environment in these commercial strips.

In the 1960s, San Juan gained its first American-style shopping mall, Plaza Las Americas, located on fringe land off of Ave. Roosevelt to the west of the Hato Rey business and financial district. It was and still remains the largest shopping mall in the Carribean. Plaza Las Americas was the first major injection of mainland-style mass retail development and chain store ownership in the island, breaking its long tradition of town-centered, independently- and locally-owned small shops. Plaza Las Americas also signaled the end of the era when traditional town centers dominated the retail landscape of San Juan, staring first with higher-order purchases such as durable goods and fancy clothing. More traditional urban centers, such as Santurce and Rio Piedras, began their long and steady declines in prominence and population during this period. For example,
the residential population of Rio Piedras, after peaking in the 1950s, has presently returned to its 1910 population level.\(^3\)

A single shopping center was not sufficient to totally derail the retail traditions of the island overnight, and to this day the transformation to automobile retailing has not been decisive. Nonetheless, it is clear that almost all of the new retail space developed on the island in the present day is oriented towards the automobile in the form of a shopping center or a lower-density retail strip equipped with plentiful parking. The increased selection and atmosphere of shopping centers resonates well with younger and more affluent Puerto Ricans. Formula developments of mainland and Puerto Rican chain stores are increasingly prominent on the island, and have further drained strength from traditional, small retail proprietorships.

6.3. San Juan Retail Geography

Presently, retail venues are geographically diffused throughout the metropolitan area, illustrating the dramatic decentralization and outward growth of both population and commerce in the commercial area. The traditional urban centers of Old San Juan, Santurce, Rio Piedras, Bayamón, and Cataño continue to host a large amount of traditional commerce in compact, walkable urban areas, though their overall share of retailing in the metropolitan area has been declining for several decades. The remaining strength of these centers is in large part contingent on their location at major transit and public nodes, as well as the presence of large, carless populations within walking distance of the commercial areas. Additionally, Old San Juan is strengthened by the tourist trade and by its prominence as an entertainment destination for Puerto Ricans. The financial and business institutions of Santurce and the ‘Golden Mile’ (Milla de Oro) strip of Hato Rey generates a modest retail market in these areas, though Santurce is noticeably distressed as a commercial district, with numerous vacant storefronts. Rio Piedras and

---

\(^3\) Interview with Esteban Sennyey, UPR, 10 January 2000.
Bayamón remain relatively vigorous commercial centers, though they cater mostly to a less affluent audience than in their heydays in the golden age of the trolley lines.

A number of other urban neighborhoods in greater San Juan maintain a traditional retail character with small shops lining a compact, walkable urban core. Among these is the stretch of Calle Loiza in the Loiza neighborhood, just north of Santurce. Again, the neighborhood caters to a less affluent clientele, but it appears to be holding its own in this densely-populated neighborhood along the busy A5 bus line.

On a larger scale, many multi-lane urban arterial avenues and highways have evolved an automobile-oriented strip development form that takes advantage of the large volumes of vehicle traffic passing by these locations (and, to some extent, the transit and pedestrian traffic). Prominent examples include Avenida F.D. Roosevelt (P.R. 23) and Avenida Jesus Pinero (P.R. 17), both running east-west through Hato Rey. Avenida Barbosa (P.R. 27) and Avenida De Diego (in western San Juan) are other examples. The main roadways surrounding Bayamón Centro, such as P.R. 2, have also developed dense automobile-oriented commercial strips.

At the metropolitan scale, the most prominent features on the retail map are the many shopping malls and centers located primarily at the intersections of major arterial streets or expressways. The largest and oldest of these is Plaza Las Americas, located rather centrally in San Juan at the intersection of Avenida Roosevelt and Expreso Las Americas. On the fringes of Bayamón’s central core are a number of shopping malls, including the large Santa Rosa and Plaza Del Sol malls to the south and north, respectively. Central Bayamón itself features a smaller mall, El Canton. In Carolina is the recently-rennovated Plaza Carolina, at the intersections of P.R. 3 and P.R. 26. Also in Carolina, adjacent to its border with San Juan, is Plaza Escorial, the location of Puerto Rico’s first Home Depot superstore. South of the heat of San Juan, towards the mountain foothills, is a major shopping mall known as Montehiedra Town Center, serving the affluent suburbs south of
San Juan. In Guynabo, near the Expreso De Diego, are two more affluent shopping centers, Galeria San Patricio and San Patricio Plaza.

Throughout the San Juan Metropolitan Area are a number of smaller shopping centers serving a more localized market with basic, day to day services. Examples include Centro Commercial Los Jardines in Guynabo, the Isla Verde Mall in Isla Verde; San Patricio Shopping Mall; and many others.

6.4. Competitive Forces in San Juan Retailing

The San Juan retail sector is in the midst of a massive influx of international retailers and large-scale, “big box” retail venues. This is the latest phase in the four-decades-long transformation of retailing brought on by the increase automobility of the city. In general, retailing in San Juan is becoming 1.) increasingly dominated by chain stores and multinational franchises, and 2.) increasingly oriented towards automobile travel.

Nonetheless, there remain lively pockets of more traditional retail activity, including street vendors, market stalls, owner-run shops, and small artisan workshops and services. The city’s retail landscape is as diverse as the shiny new two-level Super K-Mart superstore at Plaza Las Americas, to the live poultry vendors and lottery ticket hawkers in the streets of Rio Piedras. The more traditional retailers tend to cater largely to a less mobile and less affluent clientele in the traditional town centers, however, and their market share of retailing has long been on the wane.

The future prosperity of small retailers is questionable. Jose Chico, president of the Puerto Rico United Retailers Association (URA), warns that the influx of multinational retailers in Puerto Rico has just begun, and that small businesses must do more to adapt to the increasing competition that the multinationals represent. URA advocates the formation of purchasing chains among small retailers to help them compete on price with
larger chains. The Econo Supermarkets chain, a Puerto Rican association of about three
dozens food markets, has successfully used this strategy to increase the buying power and
efficiency of its outlets. Chico also notes that smaller businesses will require increased
use of technology and better organization of accounting, marketing, labor, and store
design to remain on par with national chains. Specialization into niche markets, as well
as co-location with larger chains in shopping centers and commercial strips, are also
advocated by the URA. However, this may be asking small retailers to become
something that they fundamentally are not. Many more small proprietors are likely to
slowly fade away as their owners retire and new small-business entrants fail to
materialize.

This trend could weaken traditional retailing centers in San Juan even further, unless
competitive retailers and public officials show renewed interest in these locations. At
least two government program, entitled Valeempleo and Corazon del Pueblo, have been
created to try to stop the loss of retailing from traditional centers. The programs are
administered by the Puerto Rico Commerce and Development Administration.
Valeempleo is designed to aid smaller businesses (maximum 250 employees) by
contributing up to half of the salaries of employees for one year. This is to encourage
entrepreneurial development of new firms, including retailing. The second program,
Corazon del Pueblo, encourages municipalities and merchants to work together to
achieve mutual goals of economic prosperity. This program has emphasized that the lack
of adequate parking in town centers is a major customer inconvenience and economic
disadvantage for merchants in these centers. Both CDA programs have lost substantial
portions of their budgets in recent years, and their long-term prospects and effectiveness
are unclear.

Multinational retailers have experienced great successes on the island, both for purchases
of routine sundries and services as well as for more discretionary purchases. These

retailers have introduced new standards for selection, novelty, and value, raising brand awareness and demand for nationally-marketed products. In addition, the multinationals have introduced conveniences such as one-stop shopping, extended store hours, and drive-through service that increasingly appeals to the busier lifestyles of many Puerto Rican consumers. These retailers also likely benefit from their connection to the off-island American culture, and the sense of exoticism and sophistication that the connection to this broader culture entails.

The influx of multinationals shows no immediate signs of slowing down. A number of large-scale projects have opened in the past couple of years along, and existing properties are gearing up for even greater multinational development in light of recent evolutions in retail distribution. Plaza Las Americas (or simply, “Plaza”) recently completed a major refurbishment and repositioning effort in order to maintain its dominance in the San Juan region. The mall has received a makeover to give it a fresher, updated look, and the tenant mix inside the mall is being shifted more towards entertainment and leisure shopping, since big box stores are claiming a larger percentage of commodity shopping for basics like family clothing and housewares. A new food court and multiplex theatre are other additions to this new ‘shoppertainment’ theme. The property is expanding by 100 stores (to 2.1 million square feet) and 3,500 parking spaces, and access is being improved to the De Diego expressway by means of a new, exclusive on-ramp. So as not to be left out of the emergence of big-box ‘power centers,’ several large big-box stores have been constructed on outparcels on the periphery of the Plaza Las Americas property, including Big K-Mart, Toys R Us, and a large X-tra grocery store. This strategic shift ensures that the center can capitalize on both the increasing importance of the superstore format for commodity goods, while maintaining the value and attractiveness of its traditional center as a revitalized recreational shopping experience. Plaza will also be the location of the first Macy’s store on the island.
Plaza Carolina, a large mall in the eastern suburbs of San Juan, has also expanded into entertainment venues. CineVista, a 12-screen movie complex, opened there in December 1999, exceeding its initial sales projections by 23%. Overall, Plaza is adding an additional 123,000 square feet of retail space (for a total of 170 stores) and a multi-level parking facility, at a cost of approximately $25 million.

The transformation of Plaza Las Americas and Plaza Carolina is probably fueled by the recent construction of several new and innovative shopping centers in San Juan suburbs. One of these is Plaza del Sol, a 60-store center that opened in late 1998 in Bayamón. The mall includes the first Puerto Rico outlet of American retail standard Old Navy, an island variety store chain Me Slave, a Pizzeria Uno, a Casa de los Tapes music store, as well as large Wal-Mart and Home Depot superstores. Similar to Plaza Las Americas, the center includes both commodity and entertainment components, like a 14-screen cinema, to attract shoppers of different stripes. The $50 million project is managed by PMI, a large corporation which operates 12 shopping malls in Puerto Rico.  

For their part, national retailers are generally enthusiastic about the development potential on the island. For years, the J.C. Penney department store in Plaza Las Americas has been the most profitable in the company’s portfolio. Eckerd Drug and Macy’s are among the firms that have announced their intentions to expand into Puerto Rico. In early 2000, Borders Books and Music opened its first 29,000 square foot bilingual store at Plaza Las Americas.

There are questions about how much retail growth the island is capable of absorbing in a short period of time. According to the Puerto Rico Planning Board, about 3.53 million square feet of new retail space had been approved between 1995 and 1999. The island may be reaching a saturation plateau, at least until a new retail innovations creates a demand for even more retail space. The potential overbuilding of retail space in San Juan

---

5 Gutierrez, San Juan Star, 13 January 1999.
that some fear may imply a slower rate of new growth in coming years if the influx of new properties cannot be sustained. This will have implications for the retail development potential each land parcel in the region, including the demand for new retail space in Tren Urbano station areas.

A portion of the retail economy in the San Juan region also caters to the large numbers of tourists who visit Puerto Rico annually, both as a destination in itself or a cruise ship port-of-call. A large amount of this tourist-oriented activity is located in the gentrified streets of colonial Old San Juan, where there is a mixture of upscale and modest venues selling souvenirs, clothing, jewelry, artwork, and prepared food. Additional tourist-oriented strips are located along the beach areas of Condado and Isla Verde. These areas also cater to the local and seasonal affluent populations with a wide range of cosmopolitan imported goods. The shopping centers also ply the tourist trade, advertising heavily in tourism guides to attract visitors to the island who wish to add recreational shopping to their holidays.

Crime is perceived as epidemic across San Juan, and so security is a major concern for commercial properties. Shopping centers and malls offer consumers the relative protection of suburban isolation and a well-policed, heavily traveled shopping environment. Many shopping center parking lots include access gates, tall fences, and even security guard towers to ward off potential automobile thieves. Plaza Las Americas prominently locates its glass-fronted, high tech security facility just off of the main entrance to its parking structure, presumably to reassure customers of the safety of their person and belongings while shopping there.

\[\text{Ibid.}\]
6.5. Conclusion

The retail landscape of San Juan consists of numerous layers of traditional and state-of-the-art retailing, juxtaposed in imperfect fashion throughout the metropolitan area. It is challenging to distinguish which traditional commercial venues survive simply because modernization has yet to catch up to them, and which service a genuine and solid niche market. However, it is safe to say that the influence of multinational chains and automobile-inspried retail forms such as the shopping center and superstore will continue to exert tremendous influence on the retail sector for the foreseeable future, probably continuing to drive smaller firms into extinction or specialized niche markets. The influence of the increasing pervasiveness of automobile ownership has transferred much of San Juan’s retail energy away from traditional commercial centers, and towards architectural forms that are not easily compatible with these types of traditional centers.

The combination of these trends creates large challenges for the station-area development efforts associated with Tren Urbano. The proposed station-area retailing prototype detailed in the first half of this document runs counter to many of the prevailing influences on retail development and consumer behavior in San Juan. Countering these prevailing trends with a new development paradigm will require a concerted effort to promote the transit-supportive alternative by the project’s advocates. As a first step, however, it is imperative to understand the retail market potential represented by Tren Urbano, its ridership, and its station area surroundings. This shall be the task of the following chapter.
Chapter Six:
Overview of Transit and Retailing in San Juan

This Page Intentionally Left Blank.
Chapter Seven

The Retail Potential of Tren Urbano

7.1. Introduction

The previous chapter discussed the retail environment of San Juan as it exists today. The reintroduction of rail transit into the region will alter patterns of accessibility, with the potential to transform the urban character of the city once again. In the short term, Tren Urbano will provide high-quality transit access to communities along the corridor; in the long term, these locations will become loci for new growth oriented towards the rail system. To a greater or lesser extent, the influence of Tren Urbano will affect all elements of the urban economy and form, including the retail sector. It is hoped that the system will have the capability to attract retail development, reinforcing the system and providing convenience and choice to the riders of the system, and expanding alternatives to automobile dependence for shopping trips. From the retailers’ and developers’ perspectives, Tren Urbano also represents a market to be tapped—a customer base with real needs for services, goods, and diversions. In turn, the ability of retailers to access this market is determined by the physical, policy, and financial environment of station-area development. This symbiosis between the transit system and the retail economy might be described as the ‘retail potential’ of Tren Urbano.

To estimate the retail potential of Tren Urbano, this chapter will examine Tren Urbano in light of the existing retail landscape, the current form of the urban area, the character of station areas, and attributes of the Tren Urbano system itself. As discussed in Part I, a multitude of factors influence retail investment and location decisions. The physical characteristics of the Tren Urbano corridor, as well as system and policy decisions of both the present and past, shape the retail potential of the system.
The economic importance of transit retailing (and its attractiveness as an investment) in San Juan depends on the size of this market relative to the overall retail market. If the transit share of this market is small, then the majority of retailers may conclude that it is a marginal niche that does not substantiate an investment. However if the transit share of consumers is large (or potentially large), and early transit retailing projects prove successful, then perceptions of unorthodoxy and unwieldy development risk may evaporate.

This chapter will examine the retail potential of Tren Urbano at three levels. First to be considered is the relationship of the transit system to the existing retail landscape of San Juan. This will reveal the how Tren Urbano interacts with existing commercial activity in the region. Next will be an analysis of system level, taking into account design and policy considerations that may support or deter transit retailing, especially from the customer perspective. While the precise ridership volumes and trip purposes will not be known with certainty until the system begins revenue service, it is important that the system is designed to maximize the convenience of shopping by transit. Finally, the retail potential of individual station areas will be analyzed, to identify station areas which have the potential absorb new transit-supportive retail development.

7.2. Tren Urbano’s Relationship to the Existing Retail Landscape

7.2.1. Overview

Phase I of Tren Urbano services only a fraction of the major and neighborhood shopping destinations of the greater San Juan region. This can be contributed both to the limited geographic coverage of the Phase I alignment, as well as the inertia of automobile-oriented suburban retail development, which continues to diminish the commercial importance of older, smaller, and more traditional retail districts in neighborhood business districts. As discussed in the preceding chapter, most of San Juan’s incremental retail growth occurs in fringe locations located along major automobile arterials, where
location and design is not amenable to pedestrian access or efficient transit service. Almost none of the major regional and super-regional shopping centers and malls are within walking distance of a Tren Urbano station, though bus and publico routes presently serve these destinations and are expected to continue to do so once Tren Urbano begins service. There has even been some discussion of private or municipal shuttle services serving Tren Urbano, as well as in Guaynabo.

Notably, the largest shopping mall on the Island, Plaza Las Americas, is located approximately 1/3 mile west of the Hato Rey portion of the alignment, separated from the nearest stations by a relatively inhospitable pedestrian environment. Three present-day bus services (AMA A3 and B21, as well as Metrobus II) do connect Plaza Las Americas to Hato Rey, and a similar service will likely provide transit feeder service to Tren Urbano. Plaza Carolina is located several miles from the Tren Urbano Phase I alignment at Rio Piedras, and is presently connected to there only by a circuitous bus route (A6) and público service (it may be the site of a station on a future Tren Urbano alignment). Bayamón’s newest and most explosive retail venue, Plaza del Sol, is located at a distance from the alignment’s terminus at Bayamón Centro, and is isolated from it by multi-lane arterial highways. Old San Juan and Condado, San Juan’s premier urban entertainment and upscale retailing centers (and also the most congested), are similarly removed from the alignment, though high-quality express Metrobus and AMA feeder services will continue to service these areas.

The northeastern (Hato Rey) segment of the alignment passes through a dense CBD district that is not a major retail center in a city dominated by suburban malls and shipping centers. The southwestern segment of the alignment (65th Infantry Highway Corridor) follows a former highway right-of-way that is a peripheral part of the communities through which it passes. This represents a compromise between right-of-way acquisition costs and coincidence with the existing activity centers of the area (e.g., along P.R. 2 and Avenida F.D. Roosevelt). This portion of the alignment traverses some
of the lowest-density residential neighborhoods in the central metropolitan areas, where there are few pedestrian-oriented commercial districts.

7.2.2. Interface with Transit-Oriented Districts

The two most vibrant retail areas served by the alignment are Rio Piedras and Bayamón center, town centers built up during the streetcar era. A deliberate policy decision was made to serve Rio Piedras, recognizing its commercial value to present transit riders and its pedestrian-oriented character. Bayamón center is similarly pedestrian- and transit-oriented, though the bulk of its retail activity now occurs in shopping centers on the outskirts of the pedestrian core. The Santurce district (Sagrado Corazon station) is another traditional center which is probably the least vibrant of the three traditional shopping areas serviced by the alignment. All three cater primarily to a downmarket, transit-dependent population, and the building stock and scale is incompatible with the superstore and shopping mall archetype which has dominated San Juan’s retail construction over the past three decades.

At a macro scale, the improved connectivity between these three transit centers could increase the catchment areas for businesses that cater to the transit population. With improved connectivity between Rio Piedras and Bayamón, for instance, the overall accessibility and retail choice available to transit riders would increase. Likewise, the customer base for merchants located in these areas would increase as well. This improved regional transit accessibility increases the choice and variety of goods on offer to transit patrons. It may also lead to supply-side effects, such as greater merchant specialization and industry consolidations (including transit-oriented big boxes), as has occurred in the auto-oriented sector with improved regional highway transportation. It remains a question if the smaller merchants in these districts will respond strategically to the increased sales potential afforded by the new train.

- 136 -
Conspicuously absent from the Phase I alignment is a presence in some of San Juan’s most important and congested pedestrian-oriented transit districts, such as Old San Juan isleta and Condado beach. In addition, the northern reaches of Santurce, one of San Juan’s most important commercial areas in the pre-auto era (though now severely distressed), will not be serviced until Phase IA or the extension to Old San Juan. Regrettably, soil conditions, the presence of historic structures, and the resultant expense of construction have made serving these areas prohibitively expensive for inclusion in Phase I. (For the time being, Old San Juan and Santurce will to be served peripherally with Metrobus service (bearing the Tren Urbano logo) and AMA along Ponce de Leon to the Old San Juan bus terminal.)

From a retail perspective the exclusion of these areas represents lost opportunity, as it prevents merchants elsewhere in the alignment from tapping into the spending power of tourists (especially from cruise ships), and it prevents transit shoppers from swiftly accessing the retail opportunities and entertainment venues of these key discretionary shopping areas. Connectivity with these areas might also encourage non-work, choice ridership from suburban areas onto the isleta, averting the major traffic jams often associated with the isleta and beach coast. The influx of spending power and off-peak ridership to the system would have positive ramifications for the high-end retail potential of the entire system.

7.2.3. Interface with Automobile-Oriented Districts

Most commercial activity in San Juan is oriented towards the automobile. This poses complications for any transit service, because urban design characteristics, spatial diffusion, and bulk of purchases are seldom consistent with ideal transit conditions. Furthermore, the high accessibility of consumers with automobiles diminished the value of place for the retailers, and thus shopping districts tend to be less centralized.
In the case of Tren Urbano Phase I, this situation is complicated even further, because the major automobile-oriented retail nodes (which also happen to be the larges in the SJMA and the Island), are located at a distance from the Tren Urbano alignment. As mentioned earlier, Plaza Las Americas is located a distance from the alignment. Other major super-regional retail centers, such as Plaza Carolina and Plaza Del Sol, are similarly removed. Most neighborhood-oriented shopping (with supermarkets, drug stores, etc.) are also located at a distance from the alignment, if only because most districts of the city are not penetrated by Phase I. There are a few exceptions, such as the Centro Commercial Torrimar (Torrimar station) and the Centro Commercial San Jose (Cupey station). However, in these locations there may be other limitations that infringe on the transit retailing potential of these sites, such as connectivity with surrounding land uses, low expected station boardings, or the overall economic vitality of the center.

7.3. System-Level Considerations

7.3.1. Overview

In addition to physical proximity, the design and operation of the Tren Urbano system itself will have a major impact on the willingness of customers, especially choice riders, to utilize the system for shopping or any other purpose.

Tren Urbano’s retail development strategy must maintain a strong customer orientation. Ultimately, the consumers of San Juan, some of which will rely on Tren Urbano for some of their travel needs, will dictate whether or not transit-oriented retail is a commercial success. Except in the case of the carless, transit-dependent segment of the population, consumers will have the option to veto transit shopping if there is no discernable benefit over conventional suburban shopping behaviors by automobile. Design and policy decision on the part of the transit agency can create or eliminate barriers to consumer acceptance. Before examining how Tren Urbano system design and policy measure in
this regard, it is worth reflecting on the market demographic of the system, i.e., the Tren Urbano ridership.

7.3.2. Transit Retailing Demand Side: Tren Urbano Ridership Characteristics

For any retail venture, an understanding of the potential customer base is fundamental. Traditionally retailers are conservative investors, preferring to have the clearest possible understanding of a retail market before investing capital. A transit retail venture is no different in that sense. It does differ in another, very important sense: it relies on the ridership of the transit system, as opposed to an automobile population at large, for a large portion of its consumer base. Retail investors therefore need an understanding of the magnitude, temporal flows, and demographics of the transit ridership in order to gauge the potential of their investment.

The transit retail market differs from an automobile market in a number of crucial ways. Transit riders do not necessarily represent an even cross-section of either overall population demographics or travel purposes. Major transit rider profiles include:

- **Work trip commuters**, who represent significant consumer buying power but whose propensity to shop before, during, or after transit trips may differ from automobile commuters;

- **Choice non-work riders**, who have chosen transit over automobiles for all or a portion of their travel needs as a lifestyle decision;

- **Low-income, transit dependents**, with low buying power per rider, but large buying power as a group. These groups conduct much or all of their shopping activity by transit;
• **Grade-school, high school, and college students** who have high entertainment and discretionary income potential, and may ride transit for the school commute;

• **Elderly persons** who do no drive but who may be limited in their capacity to walk long distances or carry packages; and

• **Tourist, special event and occasional riders** (e.g., for sporting events or festivals) who may be enticed to participate in certain entertainment or discretionary opportunities.

A consultancy, Multisystems, has prepared ridership estimates for the Tren Urbano system based on conventional transit forecasting methods based using travel times and assumed utility functions to determine modal splits. There are a number of inherent shortcomings of these forecasts, since the actual public reaction to the brand new rail start in a culturally distinctive environment is not known. The interaction of Tren Urbano with the automobile culture of Puerto Rico, urban development patterns, a pervasive fear of crime, feeder system reliability, and the tropical climate will only be known for sure with empirical patterns that emerge over time.

Moreover, these forecasts were never intended for market analysis such as is required to support retail investment decisions. The forecasts cannot account for variations in rider demographics and travel patterns with a resolution that would interest a transit investor. This results in one of the most serious potential shortcomings of any Tren Urbano retail planning initiative—the size and nature of the retail market represented by the system’s ridership is an unknown at the present time. Indeed, if forecasts could be made based on stated preference surveys or other methods of polling, the market potential will evolve in unpredictable ways as both ridership patterns and urban development patterns shift in the years following opening day. In other words, the ridership profile observed soon after opening day will not necessarily reflect ridership characteristics as the system matures.
This suggests that retail development around Tren Urbano stations may not begin in earnest until more is known about the characteristics and magnitude of the transit ridership, i.e., some period after the system has opened for revenue service. At that time direct observations and surveying of the ridership will be possible, and marketing studies may be used by both the public and private sectors to assess its retail significance.

### 7.3.3. Fare Policy

As of the time of writing, the fare structure for the Tren Urbano system has not been finalized. Issues relating to this policy area are currently being identified, and from here working groups will be established in order to formulate a fare policy. There are myriad implications to fare policy decisions, including the propensity of transit riders to use the system for shopping errands. Fare policy is perhaps the most important outstanding item of system policy with respect to transit retailing. These impacts of fare on transit retailing will not necessarily carry the same weight in fare policy discussion as some other considerations, such as ease of bus/publico fare integration and revenue capture, even though fare policies which promote transit retailing ten to be more user friendly in general.

Retail-supportive fare policies are those that eliminate penalties and artificial barriers for transfers or stopovers, permitting riders to ‘chain’ retail trips into trips that involve an ultimate destination at another station or location on the feeder network. Unlimited ride passes (daily, weekly, and/or monthly) or non-directional, time-valid tickets are most preferable to encourage transit commerce (and transit use in general), since they eliminate transfer and stopover penalties for both planned and spur-of-the-moment shopping trips. This is important because the inherent waiting-time penalty and schedule constraints associated with linked transit trips are barriers enough to shopping by transit. Variations on unlimited fare structures, such as unlimited ‘U-Pass’ college student passes or senior citizen programs can be very effective for capturing maximum ridership for those audiences. Other techniques to reduce transfer and stopover penalties include
directionless transfers and time-valid tickets (e.g., 90 minutes from time of purchase in any direction) that eliminate transfer barriers and reduce the cost of short-distance round trips.

More restrictive fare policies, such as single-ride tickets, paid or mono-directional transfers will not necessarily preclude transit retail development, but will add another disincentive to shopping by transit, especially when the shopping location differs from the ultimate destination. Restrictive fare policies will tend to concentrate retail activity at destination stations and transfer points, decreasing the overall market potential of any given station area.

<table>
<thead>
<tr>
<th>Fare Characteristic</th>
<th>Impacts on Customer Accessibility</th>
</tr>
</thead>
</table>
| **Unlimited Ride Passes**    | • Highest passenger freedom  
| (Daily, Weekly, Monthly, U-Pass, Senior Passes) | • Encourages stopovers and spontaneous travel  
|                              | • Engenders a sense of value for money with additional use, i.e. decreasing marginal cost of rides. |
| **Time-Valid Fare**          | • High passenger freedom  
| (e.g., 90-minute)            | • Encourages mid-trip stopovers (i.e., zero marginal cost for stopovers within time limit)  
|                              | • Beneficial for short 'errand' trips if directionless (one fare for inbound and outbound legs)       |
| **Discount Pay-per-Ride**    | • Low passenger freedom  
| (X for the price of Y)       | • Discourages mid-trip stopovers  
|                              | • Low incentive for frequent riders (i.e., slightly decreasing marginal cost)                        |
| **Pay-Per-Ride**             | • Highest penalty for stopovers (unless paired with free transfers)  
|                              | • Discourages mid-trip stopovers  
|                              | • No incentive for frequent riders, i.e. constant marginal cost of rides  
|                              | • Discourages short trips                                                   |

Table 7.1. Fare Practices and Impact on Customer Accessibility.
Table 7-1 above summarizes common transit fare practices and their likely impacts on customer behavior that reinforces transit commerce. It is recommended that these impacts be studied further and taken into consideration when the Tren Urbano fare policy is set.

### 7.3.4. Tren Urbano Concession Program

Most Tren Urbano stations include programmed concession space. The goals of the concession program include increasing convenience to transit users, improving the sense of safety and security, and enhancing the ambiance and sense of vitality the stations. The concession program also raises revenues (through rents) to support the operations and maintenance of the system.

Siemens has hired Interlink Realty International Corp. to complete a concession marketing study. Interlink is known for several innovative retailing projects in Puerto Rico, including the mixed-use Centro Europa project in Hato Rey and El Convento in Old San Juan. Concessionaires will enter 20-year leases with Siemens (who will be under contract to operate the entire system for the first 5 to 10 years), with the lessor reverting to PRHTA after the first 5 years. Letters of interest have already been received by Siemens from retailers interested in leasing space.¹

The concession study areas evaluated market demand, tenant mix, and space requirements for each station. Typical proposals for station concessions include convenience stores, news stands, coffee shops, bank branches and ATMs, fast food, sit-down restaurants, laundry and dry cleaning, copy centers, flower shops, payment centers, day care, and pushcart vendors.

Concession potential or a station is a function of station passenger traffic, other non-rider traffic, physical space and visibility, and compatibility with existing retail and non-retail

¹ Conversation with Randy Altshuler, Tren Urbano Office, 8 January 1999.
uses. Up to 9 stations have been identified as potential locations for sit-down restaurants, a larger concession than in most North American rail stations. The largest planned concession operations are at Bayamón Centro, Martinez Nadal, and Sagrado Corazon. Jardines and perhaps Universidad will have no concession space (the latter due to a potential mix-use development adjacent to the station, the former due to low passenger flows).

Despite a policy to avoid conflicts between station concession and the economic development of the surrounding community, there is inevitable a tension between concession potential and the retail development potential of adjacent station lands, particularly in station areas which can only support a small amount of convenience retail activity. There is also a recognition that visibility and access to concessions from surrounding streets neighborhood activity will increase patronage for the concessions, and thus concession space should be oriented both to the rider and the non-rider passing by.

The existence of a concession program suggests an interest on the part of Tren Urbano in direct involvement in at least some lower-order types of retail development in station area. This interest, and the retail analysis performed thus far for concession studies, could serve as a springboard for further retail analysis on a station-area scale.

7.3.5. Tren Urbano Plazas

In order to increase the commuter-shed of the rail system and improve transit access to low-density, suburban areas, the ‘Tren Urbano Plaza’ concept has been developed. The Plazas are satellite park-and-ride facilities connected to Tren Urbano stations via by high-speed buses or vans. The concept design for these Plazas also feature a concession area, similar to those found in regular Tren Urbano stations. It has been suggested that Tren Urbano Plazas be located in existing commercial and retail areas in suburban districts, to
increase the level of convenience for riders. Three candidate sites are presently under consideration for Tren Urbano Plaza Development: Toa Baja, linked to Bayamón station; Rio Hondo, linked to Deportivo station, and Caguas Plaza, linking to Centro Medico station.

Conceptually, Tren Urbano Plazas have the potential to increase ridership boardings at these three stations, thereby expanding the transit market with an infusion of relatively high-income suburban commuters. In addition, the Tren Urbano Plazas themselves can serve the convenience needs of commuters passing through. As an untried concept, the propensity of these commuters to shop at the Plaza, the transfer station, the destination station, or elsewhere along the alignment is not known.

A variation of the Tren Urbano Plaza concept would place the Plazas at existing or future major retail centers. This could encourage reverse commuting by transit shoppers to these centers, while generating a positive commercial synergy between the transit park and ride commuters and the retail venues at the Plaza. Such a concept would have to be advanced with care to avoid parking conflicts between retail and park and ride uses, and to alleviate fears which shopping center managers often possess regarding the unsavory persons that transit systems are feared to attract.

As a commuter-oriented facility geared towards the peak hour, and whose patrons will likely have access to automobiles from the Plazas, the facilities themselves probably do not have retail potential aside from small concession operations. Co-location of the plazas with existing commercial areas or new suburban ‘town centers’ may generate more use conflicts that is desirable for either entity.
7.4 Retail Analysis of Individual Station Areas

7.4.1. Overview

Many of the constraints and opportunities of transit retailing are revealed at the local station level, where land availability, station functionality, urban design, and competitive considerations are at their most tangible. This section will analyze the overall retail potential of every Tren Urbano station area in the Phase I alignment.²

7.4.2. Methodology

The analysis will examine both the general conditions at each station area, and also selected parcels with promising retail characteristics. Only the methodology, key findings, and conclusions are presented in this chapter; see APPENDIX C for a complete station-by-station discussion. Five main retail competitiveness factors were taken into account in this analysis:

- **Location and Overview:** This section will provide a general description of the station area, its urban character, and the major destinations nearby which the station serves. It also includes a description of the primary transit functionality of the station (neighborhood station, destination, terminus, transfer location, etc).

- **Access:** This includes the estimated number of daily boardings at the stations, connecting transit services (e.g., bus and público), pedestrian accessibility in the surrounding station area land, as well as automobile access and parking availability.

- **Land Use and Urban Form:** This entails a description of the existing land use characteristics of the station area, including density, uses, size and availability of

² For a more generalized analysis of station–area transformation potential for Phase I, see Shriver (1996).
land parcels (brownfield and Greenfield), and other special attributes such as public spaces, redevelopment zones.

- **Retail Environment:** This includes existing retail development in the station areas, planned in-station concession space, as well as nearby retail facilities for which the station area is included in the trading area. The latter consideration is important for assessing the retail potential of community and neighborhood retail centers.

- **Recognized Development Opportunities:** This category will include projects (retail or non-retail) which have been identified as potential development opportunities in station areas, and which may have a bearing on the retail potential of the area.

The analysis of each station area will conclude with a summary of **Overall Retail Development Potential** as determined from the above factors. A shorthand retail development potential ranking will be given to each station area, ranging from Very High to Very Low. These rankings are qualitative assessments of retail development potential based on likelihood of new retail development given the station area’s inherent commercial attractiveness, as described by the five factors above. Retail development sites with higher rankings should be the major focal points of the Tren Urbano retail development strategy, as this is where retail development opportunities are greatest. Higher rankings do not necessarily indicate that large-scale retail development is feasible or desirable; the scale of development possible will be considered separately. The rankings may be interpreted as shown in Table 7-2 below:
Chapter Seven
The Retail Potential of Tren Urbano

<table>
<thead>
<tr>
<th>Development Ranking</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERY HIGH</td>
<td>A superior location for retail development. Excellent performance in each of the five factors. These sites should be a prime focal point for the Tren Urbano retail development strategy.</td>
</tr>
<tr>
<td>HIGH</td>
<td>An excellent location for retail development. Strong performance in most of the five factors. Also good locations to focus retail development efforts, though these sites may require additional efforts or improvements to achieve successful outcomes.</td>
</tr>
<tr>
<td>MODERATE</td>
<td>Retail development is possible at these locations, though they do not rank exceedingly well in most of the five categories. Development prospects only fair, but may improve with future transformations of the area.</td>
</tr>
<tr>
<td>LOW</td>
<td>The area has significant disadvantages for retail development. Substantial transformations in the character of the area are necessary to alter these prospects.</td>
</tr>
<tr>
<td>VERY LOW</td>
<td>No significant opportunity to retail development. The characteristics of the area are incompatible with retail development for the foreseeable future.</td>
</tr>
</tbody>
</table>

Table 7-2. Station Retail Development Potential Rankings

In addition, the scale of retail development that each station area can accommodate, based on nearby competition, land availability, station boardings, access, etc., has been estimated. In reality, the development outcomes that the private sector determine to be feasible depend on a number of competitiveness issues which vary by store type, the overall buoyancy and real estate demand of the retail economy, construction costs, etc. Thus, for each station area, a range of suitable development scales is given, usually bounded on the top or bottom ends by neighborhood compatibility issues, land availability and size, access characteristics, etc. Convenience retail potential has been extracted directly from the Interlink station concession evaluation and is reported here without modification.

The retail development typologies used in the analysis are shown in Table 7-3 below:
<table>
<thead>
<tr>
<th>Retail Development Typology</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concession [S]</strong></td>
<td>Retail venues designed primarily to serve the convenience needs of Tren Urbano Riders. Examples include kiosks, fast-food service, news stands.</td>
</tr>
<tr>
<td><strong>Neighborhood [N]</strong></td>
<td>Services directed primarily at a small population within approximately 1 or 2 miles of the store (driving) or a 5 to 10 minutes travel time. Examples include convenience stores, delis, and grocers.</td>
</tr>
<tr>
<td><strong>Community [C]</strong></td>
<td>Medium-sized retail venues serving a 3-5 mile driving radius, or approximately 15-20 minutes travel time, primarily offering routine goods and services. Examples include supermarkets, hardware stores.</td>
</tr>
<tr>
<td><strong>Regional [R]</strong></td>
<td>Large retail venues drawing customers from 5 or more miles away (even regionally). These venues generate large number of trips and provide specialty goods or bulk purchases. Examples include enclosed shopping malls, superstores.</td>
</tr>
<tr>
<td><strong>Entertainment-Oriented [E]</strong></td>
<td>Retailers offering recreational shopping or entertainment rather than basic goods acquisition. Draw may be local or regional. Examples include theatres, restaurants, arcades, amusement centers.</td>
</tr>
<tr>
<td><strong>Specialty [SP]</strong></td>
<td>Goods directed at a unique local market, such as business people or students. Examples are copy/print centers, bookstores, office supplies.</td>
</tr>
</tbody>
</table>

Table 7-3. Retail Development Typologies

These findings are of course subject to the overall success of the Tren Urbano System, the investment criteria of individual retail firms and developers, public policy decisions, land acquisition feasibility, actions of competing retailer firms, and general economic conditions. Nonetheless, these findings paint a general portrait of the more and less favorable retail development locations along the Phase I alignment.

The station-area analysis in APPENDIX C begins at the suburban terminus of Phase I at Bayamón, proceeding inbound to Sagrado Corazón. A general discussion of the merits of each station will be given, followed by a discussion of the scale and type of retail development that might be appropriate at each station area. For purposes of this analysis,
the ‘station-area’ will be defined as an area approximately a 1/4-mile in radius from the station itself, though major station-area features outside of this hypothetical boundary may also be considered.

It is important to remember that, in the absence of detailed market data, an official station area development program or plan, a timeframe for development, and information about other factors which may effect the San Juan retail economy in the future, these analyses can only be taken as estimations of the retail development that may occur in these areas. In addition, many of the development opportunities associated with Tren Urbano will require some degree of investment in the public realm, particularly those which enhance the quality of the streetscape and pedestrian connectivity between the station and retail development parcels. In their present conditions, very few of the future station areas possess what may be described as a development-ready transit node at this time. In particular, a number of station areas suffer from poor street connectivity or physical barriers to walking, inadequate sidewalks and intersections, or an otherwise unsafe or unpleasant environment in the vicinity of station areas.

This public improvement program may be fulfilled either through direct public investment or as a condition for private development approval (see Chapter 8). The Tren Urbano office has a proposed ‘Station Area Improvements’ program for improved pedestrian, bicycle, transit and private vehicle access to station areas, as well as improved lighting, streetscapes, landscapes, and signage. The following analysis assumes that a reasonable amount of public realm improvements will occur by either public or private means as a prerequisite for attracting station area development. When a particular improvement is vital to the retail potential of a station area, this will be note in the discussion below.
<table>
<thead>
<tr>
<th>Bayamon Municipality</th>
<th>Visibility</th>
<th>Customer Flows</th>
<th>Urban Context</th>
<th>Potential Development Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayamon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deportivo</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jardines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guaynabo Municipality</td>
<td>Torrimar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Juan Municipality</td>
<td>Martinez Nadal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Las Lomas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Francisco</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centro Medico</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cupey</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rio Piedras</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universidad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinero</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domenech</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roosevelt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hato Rey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sagrado Corazon</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7-5. Desirable Transit Retail Attributes of Phase I Station Areas.
Chapter Seven
The Retail Potential of Tren Urbano

Table 7-4 summarizes the station area analysis, highlighting the desirable retail characteristics of each station area. Table 7-5 below lists the anticipated retail development potential of each station, based on the five-factor analysis, and provides suggestions of retail development typologies appropriate at the stations.

<table>
<thead>
<tr>
<th>Station</th>
<th>Overall Retail Development Potential</th>
<th>Retail Development Typologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayamon</td>
<td>VERY HIGH</td>
<td>S, N, C, R, E</td>
</tr>
<tr>
<td>Deportivo</td>
<td>LOW</td>
<td>S, R, E</td>
</tr>
<tr>
<td>Jardines</td>
<td>VERY LOW</td>
<td>----</td>
</tr>
<tr>
<td>Torrimar</td>
<td>LOW</td>
<td>S, N</td>
</tr>
<tr>
<td>Martinez Nadal</td>
<td>HIGH</td>
<td>S, N, R, E</td>
</tr>
<tr>
<td>Las Lomas</td>
<td>LOW</td>
<td>S, N</td>
</tr>
<tr>
<td>San Francisco</td>
<td>MODERATE</td>
<td>S, N, C</td>
</tr>
<tr>
<td>Centro Medico</td>
<td>MODERATE</td>
<td>S, N</td>
</tr>
<tr>
<td>Cupey</td>
<td>VERY HIGH</td>
<td>S, C, R, E</td>
</tr>
<tr>
<td>Rio Piedras</td>
<td>VERY HIGH</td>
<td>S, N, C, R, E</td>
</tr>
<tr>
<td>Universidad</td>
<td>MODERATE</td>
<td>N, SP</td>
</tr>
<tr>
<td>Pinero</td>
<td>HIGH</td>
<td>S, C, R, SP, E</td>
</tr>
<tr>
<td>Domenech</td>
<td>MODERATE</td>
<td>S, N, SP</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>MODERATE</td>
<td>S, N, SP, E</td>
</tr>
<tr>
<td>Hato Rey</td>
<td>HIGH</td>
<td>S, N, SP, E</td>
</tr>
<tr>
<td>Sagrado Corazon</td>
<td>HIGH</td>
<td>S, N, C, R, E</td>
</tr>
</tbody>
</table>

**LEGEND:** S = Station Concession; C = Other Convenience; N = Neighborhood Center; R = Regional Center; E = Entertainment Retail; Sp = Specialty Market Opportunity

Table 7-5. Station Overall Retail Potential

7.5. Key Station-Area Retail Development Opportunities

The retail analysis indicates that several station areas have VERY HIGH or HIGH development potentials. The opportunities at these stations are very diverse in nature, depending on the commercial and physical characteristics of the stations.

The key retail development opportunities are summarized in Table 7-6 below:

- 152 -
### Chapter Seven
The Retail Potential of Tren Urbano

<table>
<thead>
<tr>
<th>Station</th>
<th>Key Retail Development Opportunity</th>
</tr>
</thead>
</table>
| Bayamón              | **a.) Brownfield Parcels**<br>Higher-order retail development or entertainment use on vacant auto-accessible parcels surrounding station.  
|                      | **b.) Town Center Revitalization**<br>Redevelopment of Bayamon Centro commercial core with neighborhood, community, or specialty retail |
| Martinez Nadal       | **Brownfield Parcels (Higher-Order)**<br>Higher-order retail or entertainment use on vacant auto-accessible parcels around station. |
| Cupey                | **Shopping Center Revitalization (Higher-Order)**<br>Higher-order retail uses in pedestrianized shopping center and retail strip. |
| Rio Piedras          | **Town Center Revitalization**<br>Redevelopment of Rio Piedras commercial core with neighborhood, community, or specialty retail. |
| Piñero               | **a.) Brownfield Parcels (Higher Order)**<br>Higher-order retail or entertainment use on high-visibility Telefonica site.  
|                      | **b.) Urban Arterial Revitalization**<br>Creation of office- or neighborhood- compatible convenience, specialty, or entertainment uses along Muñoz Rivera and Ponce de León. |
| Domenech             | **a.) Brownfield Parcels**<br>Office- or neighborhood-compatible convenience, specialty, or entertainment uses on available parcels in the heart of the Hato Rey district.  
|                      | **b.) Urban Arterial Revitalization**<br>Creation of office- and neighborhood- compatible convenience, specialty, or entertainment uses along Muñoz Rivera and Ponce de León. |
| Sagrado Corazón      | **a.) Brownfield Parcels (High-Order)**<br>Higher-order retail development or entertainment use on vacant and highly-visible parcel west of the station.  
|                      | **b.) Creation of Community Center**<br>Tie station to surrounding neighborhoods, institutions, and the intermodal center with convenience, neighborhood, or specialty uses. |

Table 7-6. Key Retail Development Opportunities by Station Area.
7.5.1. Higher-Order Retail Development Potential

Several station areas may have the potential to support a higher-order retail development, such as a regional shopping or entertainment center, which transit alone would probably not support: Bayamon, Martinez Nadal, Cupey, Pinero, and Sagrado Corazon. At these locations three factors converge at one location: high automobile access and visibility (in addition to high transit access); availability of large, contiguous undeveloped or re-developable land parcels; and compatibility with neighboring land uses. As with all retail development opportunities, a more detailed competitive analysis, specific to the proposed tenants of the development, will be required to verify the viability of these locations. Nonetheless, such retail development opportunities, of the scale of Miami’s Dadeland Station or San Diego’s fashion Valley, are very scarce in close proximity to Tren Urbano. These parcels deserve therefore deserve particular attention.

7.5.2. Revitalization of Existing Commercial Districts

A number of historic town centers are serviced by the Phase I alignment, including Bayamon Centro, Rio Piedras, and the Golden Mile CBD corridor. The advantages of these sites are their pre-existing compact urban design, commercial districts and history of commercial activities, and the surrounding, transit-supportive housing units nearby that could help to form a basis for the Tren Urbano ridership. In the current transit system, Rio Peidras and Bayamon are important hubs of transit-accessible commerce, particularly for persons of lower income. Unfortunately, these central transit-supportive districts are among the least viable commercial areas in the SJMA today, so significant challenges may be faced in their revitalization if transit does not draw a large enough market to these areas.
7.5.3. Creation of New Transit Commercial Nodes

There are limited but interesting opportunities to create new commercial nodes in conjunction with Phase I, particularly on brownfield parcels. The large land parcels near Martinez Nadal could, depending on the evolution of the area, support a new transit-based community with neighborhood retail, or even support a larger retail venue as discussed above. Sagrado Corazon station is located on the fringe of existing neighborhoods, but has the local population and high transit accessibility (as a bus transfer center) to become a new focal point for a local area that is relatively underserviced. Again, the potential at this location depends on the larger redevelopment plans for the area.

7.6. Conclusion

Tren Urbano station areas exhibit a wide variety of characteristics, including their surrounding urban context, transportation access and station visibility, potential for future transformation through development, existing retail activity, and functionality in the transit system (destination, transfer node, neighborhood station, etc.). This results in a variety of retail development potentials that are responsive to the needs and potential of the surrounding environments. In addition, there are potential retail development sites suited to almost every type and scale of new retail development, ranging from small kiosk concessions to massive multi-tenant regional shopping and entertainment destinations. This potential, however, does not necessarily mean that the development of such projects is destined to occur, or even that is it necessarily the most desirable outcome for the station area. Such questions will have to be resolved through a more comprehensive visioning process taking into account all of the possible transformations for the station area.
Chapter Seven

The Retail Potential of Tren Urbano

Both short-term and long-term time frames are relevant in assessing the retail potential of Tren Urbano. As discussed earlier, the Phase I alignment does not provide access to most of the major retail development in the San Juan Metropolitan Area. Of those retail areas which are services by Tren Urbano, the system provides only limited access to the automobile customer catchment areas of those developments. Even leaving issues of customer convenience, safety, package-carrying, etc. aside, this suggests that the system will not see major use initially for most of the shopping trips of San Juan residents, even those in very close proximity to the system. The system does provide some interesting distortions in the existing accessibility patterns of the city, for instance, the high transit accessibility between the Cupey area and Bayamon. It will be interesting to observe the response of both retailers and consumers to the new accessibility contours.

Ironically, the Phase I station areas with the best pre-existing land use and urban design characteristics are among the weakest economically today in the overall metropolitan retail sphere. The retail venues that are strongest economically (the shopping centers), tend to lack both proximity to the alignment and the design characteristics that would encourage transit access. This situation suggests that the short-term impact of Tren Urbano on the retail sphere is not likely to be high.

The long-term prospect of the system may be more promising. The retail development opportunities associated with Tren Urbano station areas are limited because of a number of factors, including: the geographic limitations of the area served and its ridership catchment area; the distance of many of the stations for strategic retail nodes in the automobile economy; the lack of developable land; the un-marketability of parcels because of low passenger boardings, invisibility, size, or the character of surrounding land uses. Note that many of these un-marketability characteristics are not readily influenced by public policy or design improvements such as improved pedestrian connections, zoning changes, or other incentives.
There are a number of interesting retail development possibilities along the alignment. On the smallest scale, but with the most universal implementation, is the potential to include concession developments in each station, to increase passenger convenience and generate revenue for the project. This potential has, of course, been recognized by Tren Urbano for a long time and is integrated into the design of the stations. In addition, there are opportunities to use retail projects to connect the transit system more closely to surrounding commercial areas (e.g., Bayamon, Golden Mile stations), or to spur the redevelopment of existing commercial districts (e.g., Rio Piedras). Retail developments may also be key to creating new neighborhood focal points around stations, in the more suburban districts of the 65th Infantry corridor, as well as urbanized neighborhoods in need of revitalization (e.g., Sagrado Corazon).

One of the more exciting opportunities, but perhaps the ones requiring the most deliberate effort on the part of the public sector, is the potential to use sites with good automobile accessibility to draw higher-order retail activity (such as regional centers) into proximity of transit. Large-scale developments will, practically speaking, require the large traffic flows and development ‘insurance’ that only automobile access can provide in a relatively low-density city such as San Juan. However, once the project is built in proximity of transit (using good pedestrian design and transit accessibility practices), transit riders too can benefit from access to developments that typically locate only in sprawling environments. And as the city physically transforms with the presence of transit, a larger and larger number of patrons may decide that it is convenient to access those retail opportunities by transit, either as a dedicated shopping trip or in conjunction with work or school commutes. To do this, the public sector must be willing and prepared to promote this idea, help illustrate that it is possible, and proactively assist developers (with information, financial, or in-kind assistance) to make such an unconventional practice a reality.

While the diversity of development locations is high, the number of development sites for any particular type of retail development is rather low. Only a handful of stations possess
with large contiguous parcels, compact commercial districts, good automobile access, or high transit passenger volumes. This suggests that development sites for retail uses in station areas are a scarce resource that should be treated as such. Before development proposals are solicited or approved, Tren Urbano officials and municipalities should take into consideration the highest and best uses for each of these parcels, retail or otherwise, before simply approving the proposal of the first developer who shows interest. This will safeguard against the construction of underutilizing or inappropriate developments, and will maximize reinforcement of the system through land use. As the number of parcels are small and the period before opening day becomes shorter and shorter, the urgency of commencing a station area development program in earnest grows larger each day.

While many decisions about the alignment and design of Tren Urbano are irreversible now that concrete has been poured, there are a few key areas where system-level decisions about the operation and development of the system can help or hinder station-area development in general, and shopping use of the transit system specifically. The most outstanding of these is the question of fare policy. Ideally, fare policy will maximize the freedom of customers to make mid-trip or transfer-area stopovers without a fare penalty. Fare policies that are supportive of transit retail include: unlimited ride passes (daily, weekly, monthly, etc.): unlimited ride passes for special populations (grade school students, university students, senior citizens, etc.); time-based tickets; and directionless transfers. Fare policies that tend to inhibit stopovers and spontaneous shopping ravel include pay-per-ride-tickets and mono-directional transfers. Furthermore, Tren Urbano can also encourage retail activity in the future through advertisement and directional signage programs in stations, vehicles, buses, and around the city. Numerous details of station design can also encourage retail viability. These include visibility between trains and surrounding development, clear, safe pedestrian connections between the station and retail development, and the positioning of parking lots and major roads so that they do not discourage pedestrian travel or give preference to patrons arriving by automobile.
In summary, the disconnect between the present retail spatial organization in San Juan and the alignment of Phase I and its stations suggests that the short-term impact of the system on retail travel in the city will be limited. With conscientious public efforts to reinforce station areas, however, a number of promising retail opportunities that support the development of a transit culture in the city may be exploited. Several outstanding system design considerations can encourage or discourage this outcome. It is extremely important that the full envelope of retail opportunity (or any other type of land use) is explored as early as possible in the station-area planning process, so that public planning and investment efforts harmonize with the needs of viable retail development.

Having examined the commercial retail potential of the Tren Urbano system, the next chapter will turn toward questions of implementation, connecting the commercial analysis to the institutional and policy context which may either buttress or stifle the implementation of the system’s commercial possibilities.
This Page Intentionally Left Blank.
Chapter Eight

Institutional and Policy Framework of Tren Urbano

8.1. Introduction

Because of the novelty of transit-supportive development in San Juan for both the public and private sectors, and a general policy environment geared toward low-density automotive development, desirable transit-supportive development will not emerge spontaneously. Deliberate planning and policy interventions will be required to attract development that is viable in the marketplace, while still exhibiting the design characteristics and densities that will support the transit system. Policy changes might range from regional growth management and infrastructure investment practices down to individual project approvals and design of streetscapes. Some specific development sites may contain encumbrances (e.g., contamination, obsolete structures, etc.) which place them at a relative disadvantage to suburban sites, that cause them to lay fallow for decades. Furthermore, there is a danger that without public guidelines, development which is inappropriate in program, scale, or design may be placed on scarce station-area development lands.

These considerations raise the question of which agency or agencies will lead or support the development of transit-supportive development in San Juan. This chapter will explore this question by comparing the planning and policy needs of station-area development projects with the interests, jurisdiction, and capabilities of various public and private actors involved in planning and urban development in San Juan.
Chapter Eight
Institutional and Policy Framework of Tren Urbano

8.2. Current Institutional Framework of Station-Area Development in San Juan

The planning environment surrounding Tren Urbano is presently in a state of transition, particularly with the recently signed cooperative agreement between the PRHTA and the Junta de Planificación, establishing a Special Public Policy Committee to plan for station-area development, and a Special Interagency Committee to review projects within 500 meters of Tren Urbano stations. This section will provide an overview of the public agencies with an interest or direct involvement in station-area planning for Tren Urbano.

8.2.1. Puerto Rico Highway and Transportation Authority (PRHTA)

The Puerto Rican Highway and Transportation Authority (PRHTA) is the Commonwealth-level agency in charge of the Tren Urbano project. It was formed in 1965 as the Puerto Rico Highway Authority, which became the PRHTA in 1991 when its new transit mission was added. It receives the bulk of its operating funds through island petroleum taxes, and toll revenues, and also receives capital grants from the U.S. Federal Government. Executive Director Sergio Gonzalez characterized the agency as a "small, efficient organization of technical contract managers," which has had tremendous success in the outsourcing and privatization of transportation infrastructure construction and operation.

The day-to-day management, design, and planning of the system is executed by its subsidiary, the Tren Urbano Office (TUO) of PRHTA. PRHTA falls within the responsibility of Puerto Rico's Secretary of Transportation. Responsibilities of PRHTA on the Tren Urbano project include preliminary design, acquisition of right-of-way, permitting, preparing the environmental impact statement, and overseeing the

---

1 See Park (1999) for a detailed exploration of the role of PRHTA in station-area development.
management of the design-build-operate construction contracts. The TUO contracts for many of those tasks with the GMAEC, a joint venture of on- and off-island architectural and engineering firms.

The fast-track timing of Tren Urbano design, financing, and permitting through a Design-Build-Operate contract structure served both to reduce the overall anticipated cost of the project, and also progress the project to the construction phase within one gubernatorial election cycle, ensuring that the project did not become the victim of a changeover in governance. In retrospect the scheme may have accomplished these goals at the expense of land use planning and community participation, because so much effort was placed on designing and tendering the construction contracts. Thus, San Juan finds itself with a new heavy rail system under construction, but without substantial progress toward a comprehensive vision or development strategy for how the urban fabric will be adapted to the $1.75 billion piece of transportation infrastructure. While many American rail projects have been advanced over the last two decades without significant land use planning, Tren Urbano lags somewhat behind its peer projects of the late 1990s in the area of station-area planning, such as Portland, Seattle, Tampa, Orlando, and Salt Lake City.

PRHTA and its consultants, the Tren Urban Office, are both involved in station area planning, especially as it pertains to the integration of exiting transit services, development of park-and-ride facilities and Tren Urbano Plazas, planning and provision of public realm improvements, and potentially joint development on the 83 acres of station-area land which PRHTA currently owns. Currently much of this land is being used for construction staging or is being land-banked for the construction of park-and-ride lots (itself a land-banking strategy until it is considered economically feasible to pursue joint development projects.

PRHTA does not presently have the legislative authority to pursue joint development or acquire station-area land for purposes of development. It is only allowed to use its land
holdings for purposes related directly to transportation infrastructure. A Puerto Rican Senate bill, S1419, was introduced to give PRHTA broad development powers in station areas (approximately a 500m-radius around the station itself). The PRHTA would gain the authority to pursue joint development projects, including the provision of development incentives to increase the economic viability of development. This legislation would also grant the agency the power of eminent domain for purposes not directly related to transportation. After years of being stalled in the legislature, a modified draft of the bill is currently enjoying renewed support, raising hopes that it will soon be passed and signed into law. In the eyes of some opponents, the bill, while very beneficial for the long-term development of Tren Urbano, grants even more power to an already powerful agency, which can act unilaterally in many key infrastructure planning and permitting activities. Moreover, it would reverse a recent trend of decentralization of land use planning from island-wide authorities to the municipal level.3

The Tren Urbano office has an in-house staff of urban designers and planners, under the direction of TUO's Director of Planning and Design, Jeffrey F. Squires. According to Squires, the Tren Urbano office currently has three main planning task areas: preparing for physical improvements for the “opening day” (i.e. streetscape, park-and-ride, image, and development opportunities that can be completed before revenue service begins in 2002); planning of Phase IA, the Minillas Extension into the heart of Santurce; and other future corridor studies, such as to the international airport, Carolina, and Old San Juan.

There is a recognition that other planning areas have not received adequate attention through the fast-track process, but inter-agency coordination and exploration of a broader planning agenda have had a difficult start, but are now under way. This includes exploring in greater detail the joint development opportunities, at each station, potential private land development opportunities, and public realm improvements. Next step efforts could include bringing a Tren Urbano presence to local real estate meetings and

3 Sepulveda.
conferences, disseminating information about the system\(^4\). A prerequisite to this activity will be building relationships with other agencies, municipalities, community groups, and business stakeholders which have thus far been largely excluded from the Tren Urbano planning process.

As of 1999, bi-weekly station area planning meetings were being held at the TUO, including planning and urban design personnel, project implementers, GMAEC, Tren Urbano Designers, and representatives of AMA and Metrobus. The intention of these meetings was to prepare long-range development master plans for each station area. However, two factors have led to the suspension of these planning meetings. First, it was decided that it was better not to produce rigid station area visions, but rather capitalize on development creativity and market knowledge to propose developments of their own. Second, a number of construction-phase complications with the civil contracts of Phase I have diluted the resources that the TUO can devote to long-term land use planning.

Mr. Squires has commented that neither the Tren Urbano Office nor PRHTA see themselves as a land development agencies, even though the ultimate success of the ‘Tren Urbano Epoch’ will be measured in part by its ability to spur land transformations.\(^5\) This responsibility lies primarily with the municipalities and the Puerto Rico Planning Board, and thus it is generally outside of both the expertise and the jurisdiction of PRHTA, primarily an infrastructure and engineering agency. Nonetheless, GMAEC consultants are preparing preliminary land use and development plans, in recognition that land use transformations will be an important element of the success of the project. The primary focus of TUO planning efforts is likely to remain on system-oriented issues such the feeder system, fare policy, and extension planning. Squires sees Tren Urbano as bringing ‘evolutionary,’ not ‘revolutionary’ changes to the San Juan landscape, as the growing weight of the Tren Urbano culture gradually brings a political and economic shift.

\(^4\) Squires, Presentation to Tren Urbano Professional Development Program, January 17, 2000.
\(^5\) Ibid.
8.2.2. Puerto Rico Planning Board (*Junta de Planificación*)

The Puerto Rico Planning Board is an island-wide authority responsible for the approval of development projects. In recent years its power has been eroded by a movement to decentralize planning by giving municipalities planning autonomy if they meet a certain set of criteria. Nonetheless, the agency is empowered to approve major projects (including major shopping centers), and still plays a role in the development of major projects in the San Juan Metropolitan Area, especially in municipalities which are not seeking planning autonomy.

All planning on the island, to the extent that it occurred, was handled at the municipal level until the 1940s. The Planning Board was created in 1942, recognizing that the island possessed limited land resources for agriculture and urbanization, which was beginning to occur rapidly. It was thought the individual municipalities did not have the planning resources to manage the increasingly complex analyses and decisions that they were facing.

Political opposition to this centralization has risen in recent years, until municipalities have been given the option to gain planning autonomy or ‘home rule’ once again. To become autonomous, municipalities must meet certain criteria, including preparation of a master plan and allocation of minimum levels of planning resources. In reality, autonomous municipalities will have widely varying levels of planning sophistication based on size and fiscal strength. San Juan is currently pursuing planning autonomy, while Bayamón and Guaynabo have already obtained this status. The Planning Board will still retail planning approval for certain large-scale projects in autonomous municipalities, including regional and super-regional shopping centers, hospitals, airports, etc.
8.2.3 The Policy Committee and Special Interagency Committee

(El Comité Interagencial Especial (CIE))

In the initial years of the project, the Puerto Rican Planning Board has had very little input in the planning of Tren Urbano, and no serious planning dialogue existed between the Planning Board and PRHTA. However, a new resolution (18 April, 2000) has been issued by the Office of the Governor of Puerto Rico, and signed by the respective agencies, stipulating a new cooperative station-area planning arrangement between PRHTA, the Regulation and Permit Authority (ARPE), and the Puerto Rico Planning Board. The resolution establishes two new interagency station-area planning entities: the Special Public Policy Committee, responsible for recommending transit-oriented zoning measures for Tren Urbano, and a Special Inter-Agency Committee, which will review all station-area projects within 500 meters of the Tren Urbano alignment.  

According to the resolution, the arrangement is stimulated by the need to promote "alternatives to traditional models of development and land use, the formation of a balance between the natural and built environments." This will be accomplished through the designation of urban growth nodes and the overall densification of the urban area.  

The Special Interagency Committee will consist of a representative of the PRHTA, the Planning Board, the ARPE, and a representative of the Municipality if the project takes place in an autonomous municipality (e.g., Bayamón and Guaynabo). The Committee will promote dialogue with station-area project proponents to advocate mixing land uses, forming pedestrian connections, reducing parking provision, and appropriate building and site design. The Committee will also provide information to developers, promoting the objectives of the new resolution.  

---

7 Ibid.
The general rules, operating procedures, and staffing requirements have not yet been established for these committees, nor have the respective roles of the committees and the Tren Urbano planning and design team. However, there is a recognized sense of urgency in developing this protocol and commencing the work of the committees.⁹

The creation of the new committees is a major advancement in the inter-agency cooperation required for comprehensive station-area development planning. Nonetheless, the station-area planning retains a significant amount of disunity between efforts at the commonwealth level and the municipal level.

### 8.2.4. Municipalities

Municipal governments are traditionally major players in land use control and development in American cities, and San Juan is no exception. There are 13 municipalities within the San Juan Metropolitan Area (SJMA). The Phase I alignment penetrates three of these, San Juan, Guaynabo, and Bayamón.

San Juan is currently preparing the master plans in prerequisite for obtaining planning autonomy. Bayamón, Guaynabo, and Carolina (which is likely to be included in future Tren Urbano alignments) already possess autonomous status. Once municipalities gain planning autonomy, they will be vested with a number of development powers, including: transfer of development rights; the ability to levy development impact fees; requirement for adequate community facilities and linkage; and land assembly. These are in addition to other existing municipal powers, such as zoning control.

⁸ Ibid.
8.2.4.1. San Juan Municipality

San Juan Municipality is the core of the metropolitan area, including its premier business, tourist, and historical districts. It also contains the most sophisticated municipal planning resources in the region, including a new Geographic Information Systems information database which is currently under construction. The municipal plan, necessary to obtain planning autonomy from the Planning Board, is currently in an advanced draft stage, and includes references to the Tren Urbano system and designates station areas as special development and re-development districts (along with many location located off of the alignment).\(^{10}\) In addition, the San Juan Planning Department has commissioned Estudios Technicos, an island research firm, to complete a station area study for stations within the municipality. This is taking place independent of the efforts of the Tren Urbano office. To date the city has not made any major planning or regulatory changes in anticipation of the alignment.

8.2.4.2. Guaynabo Municipality

Guaynabo is an autonomous, smaller, suburban, and more affluent municipality with only one Phase I station (Torrimar) in the low-density 65\(^{th}\) Infantry Highway Corridor portion of the alignment. The municipality contains only Tren Urbano bone station, which is the least amenable to new development out of all the stations in Phase I, Guaynabo is not expected to be a major player in future station area development efforts. There are, however, potential connections to the historic town core to the south (home of a substantial transit dependent, lower income population), and to the rapidly-growing San Patricio area to the north.

\(^{10}\) San Juan Municipal Plan (Draft, 1999).
8.2.4.3. Bayamón Municipality

Bayamón Municipality is both a suburban municipality as well as a major regional urban center with a relatively healthy historic core. It is the site of the western terminus of Phase I, and is expected to have high walk-on boardings as well as transit transfer and park-and-ride traffic. It contains three Phase I stations, with a wide variety of joint development, revitalization, and new development opportunities.

The municipality has taken a proactive stance toward station area planning, particularly in the vicinity of the Bayamón (Centro) terminus station, where diverse opportunities exist (see Chapter 7). Led by a savvy, action-oriented mayor, the municipality has prepared a station area plan for the brownfield lands in the vicinity of the station area (owned by the municipality and PRHTA), to include new retail and residential space, a hotel, and a cultural/performance center, all comfortably integrated with the station and intermodal transfer center, as well as the existing historic town core immediately to the south. However, this plan had faded because of a lack of funds to provide development inducement subsidies and for construction of the cultural center. The municipality is currently re-evaluating its long-term plans, including more creative financing options. It is also advertising for a hotel development, on a site to the west of the Bayamon terminus station. Recent actions of the municipality suggest a willingness of the municipality to commence station-area planning unilaterally, though the formation of the interagency committees may force a higher degree of cooperation.

While both Bayamón and San Juan have prepared land use plans for station areas within their jurisdiction, these plans fell largely on deaf ears with the Tren Urbano Office, a casualty of the lack of working relationships between state agencies and local municipalities. This has led to a redundancy of planning efforts, and a number of missed opportunities to align complimentary tasks and resources to achieve a common good.
8.3. Attitudes and Perceptions of Retailers and Developers

Commercial developers are largely thought of as being on the receiving end of the station-area development—they are the investment-backed place makers whose involvement the public sector is trying to woo. It is indeed true that retail investors, who are probably ambivalent toward the public-sector concern of reinforcing the transit system, must be induced to invest in station areas as opposed to less expensive, or even superior sites, located away from the alignment. Once the decision is made to locate a development in a station area, however, either because of its inherent promise or public inducement, it will largely be private money that actually creates the built environment. Therefore the attitudes and economics of private development is a primary concern in the development of Tren Urbano's retail strategy. In San Juan and in Puerto Rico in general, the professional community of developers is rather small, with many participants having established business relationships with others. Most development in Puerto Rico is performed by on-island firms, though it occurs increasingly with the collaboration of off-island franchisers or investments.

Most developers in Puerto Rico have taken a wait-and-see attitude toward Tren Urbano, not unlike many development projects surrounding new highway infrastructure on the island or elsewhere. A number of land transactions are reported to have occurred in station areas, often including a rise in land values, but development proposals have not been put forward for most parcels (the mixed-use project at Martinez Nadal is an exception). There is a sense of intrigue and commercial opportunism associated with Tren Urbano, but there is not a clear conception among developers of exactly what transit-oriented development entails. This is compounded by the lack of urban design, land use guidelines, and long-range visions for station areas produced by the public sector planning agencies. These could provide private interests with a clearer conception of the sometimes sweeping changes that are expected in station areas over the long term. At the same time, the current zeitgeist is that overbearing, highly-explicit centralized planning
by the PRHTA or the P.R. Planning Board are not in anyone’s interest, because it stifles creativity and innovation, and may also conflict with the refined market analyses that a potential investor might be expected to perform. [De Lemos V]

Perhaps unsurprisingly, many in the development community hold lingering doubts about the viability of development in station areas. The largest barrier is ignorance, and the general disconnect between the public-sector visioning and infrastructure provision and the private development community which really bears the bulk of station-area development risk and reward. Those development risks are both real and perceived. Development requirements for station areas will be unconventional as compared to the relatively uncomplicated formula development that predominates new retail construction on the island. This development will also require deviations from automobile-era conventional wisdom such as parking ratios, conflicting with both current private and municipal practices.

In terms of development image, many station areas are in what are considered a retail ‘nowhere’ (particularly along the 65th Infantry Corridor), or are in areas that are considered faded, down market, or unfashionable (e.g., central Bayamón and Rio Piedras, Sagrado Corazón).

Safety and security are additional considerations. A number of stations are located in areas with reputations for theft, violent crime, and drug activity, which can place customers and retailers alike on edge, and potentially raising security, insurance, and maintenance (e.g., repair) costs. And, if customers are afraid or hesitant to come to the store, the retail investment is lost. The fear of crime is one of the primary advantages of locating in an auto-oriented development that is relatively isolated from questionable surrounding districts (and thus accessible only by automobile), with enhanced security features such as high-intensity lighting, parking lot guards, and fenced-off parking areas with controlled, gated access.

[11 Sepulveda (1999).]
In the retail case in particular, investors in station area locations will be gambling on the degree to which transit riders will be willing to adjust their personal habit and shop by transit or on foot. For some investment, such as concessions, there is a very natural symbiosis between traditional transit strongholds, such as work commuters, and convenience goods like ATM machines, food vendors, news stands, dry cleaners, etc. However, a larger or less commute-focused retailer such as a superstore or Cineplex relies largely on shopping trips that are not chained into a home-to-work journey. Rather, these trips are likely to be home-to-shopping direct (and often in off peak evening or weekend hours), or chained into a long line of other shopping or recreational tasks. The compatibility of these trip patterns with public tastes for transit travel, the bulk of purchases, and the coverage and frequency of off-peak transit are just a few of the factors which contribute to the likelihood of these behavior modifications. Moreover, the retailer must be assured that customer convenience is not actually lost, especially if the development is to rely heavily on automobile patrons as well. This scenario could arise if congestion, the inconvenience of parking, security, or other convenience or image factors render the location undesirable from the consumer side.

8.4. Implication of Institutional Framework for Transit Retailing

The level of interagency cooperation (TUO, PRHTA, P.R. Planning Board, Municipalities, etc.) in the initial years of the Tren Urbano project has been low, though there are indications that it is improving as Tren Urbano comes closer to reality and the urban planning needs it creates come into sharper focus. Most notable is the formation of the Special Interagency Committee, and the renewed interest in legislation granting PRHTA broad planning and land disposition powers in Tren Urbano station areas. While these are signals that the current planning environment is improving, there are a number of issues that may still be causes for concern in the area of station-area planning and development:
Chapter Eight
Institutional and Policy Framework of Tren Urbano

- **Degree of Interagency Cooperation:** Many agencies and stakeholders who have an interest in station-area development are still not included in the interagency dialogue started by the Special Interagency Committee. For instance, San Juan, a municipality which has not yet obtained autonomy, will not have representation on that Committee for projects in its own jurisdiction;

- **Coordination with Regional and Municipal Growth Plans:** There are no apparent explicit ties between growth strategies to promote well-designed station area development, and regional growth management plans to curb development on the urban fringe. Thus, station area development will not necessarily be used as a means to deter or replace growth occurring on the fringes of the metropolitan area, or even in automobile-oriented areas within San Juan, Bayamon, or Guaynabo themselves;

- **Designation of a Lead Station Development Agency:** Of all of the agencies associated with Tren Urbano, there is no one agency that is designated to take the lead on station-area development efforts or to coordinate system-level planning and promotional efforts. Thus there is no clear ‘ownership’ of the station-area planning program.

- **Preliminary Station-Area Market Analysis and Master Planning:** At present, a number of fundamental development perquisite activities have not been completed, such as the adoption of station area land use plans, development guidelines, and zoning regulations to permit the desired type of development. Moreover, there has not yet been a comprehensive real estate market analysis of the development potential of station areas or a ‘big picture’ analysis the uses to which station-area lands are best suited. These studies are desirable as a basis for an economically viable station area development program. The new Special Public Policy Committee is intended to address this issue.
• Reform of Development Regulation, Permitting, and Approvals: Many existing regulations, permitting processes, and zoning ordinances either contradict the requirements of station-area development or make station-area development exceedingly difficult to implement. Importantly, this includes regulations over parking quantities permitted in station areas. These regulatory deficiencies must be corrected in order to make station area development at least as attractive, or more attractive, than more conventional suburban development projects.

• Proactive Planning and Development Liaison Functions: Because of the novelty of transit-oriented development in San Juan, there is a high degree of unfamiliarity with the objectives and design requirements of this type of development within the development community. There is currently no interface between Tren Urbano and the development community for distribution of information or assistance with station-area development inquiries.

• Timing Considerations: The time window for forging interagency alliances, identifying resources, and adopting station area guidelines, regulations, and development approval procedures is rapidly closing, as Tren Urbano approached revenue service in 2002. It is highly desirable to have the institutional infrastructure in place before station-area development pressures accelerate.

Interagency and political rivalries have caused significant obstacles for Tren Urbano station planning efforts. Agencies and municipalities have demonstrated a resistance to the Tren Urbano Office’s planning initiatives if they run counter to another agency’s own inertia, visions for development, or its existing relationships with planners and land developers. Increasing construction-phase difficulties with the Tren Urbano contracts have also placed enormous demands on Tren Urbano resources, detracting from station-area planning efforts. It is also unclear what level of engagement TUO will take in planning activities (aside from the planning of new extensions and transit facilities) once
the system has been completed and the office begins to phase down its operations. The formation of the interagency committees may begin to address institutional difficulties such as these, outlining a common TOD agenda and enticing (or forcing) all relevant parties to the table.

8.5. Rationale for Increased Interagency Cooperation

The list of potential beneficiaries from intensified urban development along the Tren Urbano corridor is potentially very long. Communities benefit from economic development and revitalization, the transit agency gains increased ridership, island-level agencies see greater economic efficiency and a land-use vindication of the public infrastructure investment. Moreover, a station-area development partnership is better equipped to present a wide range of resources and inducements to potential development projects, increasing the likelihood that the initial barriers to the station area development concept will be overcome.

Presently, however, the agencies associated with Tren Urbano have performed station-area planning functions largely in isolation. Within the Tren Urbano office, moreover, long-range visioning is currently being supplanted by short-term difficulties with construction management, which is consuming resources and staff time at the expense of station area planning. A cooperative, interagency approach to station-area planning development may be the most effective method to maintain a sustained focus on these issues, and promote the most efficient use of limited resources.

The benefits of Interagency Cooperation include:

- **Enhance coordination of public policy** across agencies, reducing conflicting policy positions and streamlining the development permitting and approval process;
• **Inclusion of a larger number of station-area stakeholders** in the planning process, insuring that station-area plans satisfy a broad set of both local and regional interests;

• **Pooling of resources, powers, and jurisdiction** of diverse government agencies into a single pro-planning entity, broadening the planning tools and tactics at its disposal; and

• **Delegation of tasks to the most efficient level** of interest (community, municipality, regional, or commonwealth) or the proper functional discipline (transportation, economic development, planning, etc.), while maintaining an integrationist perspective.

It should thus be a priority for the Tren Urbano Office and other municipalities with vested interests in the project to begin new combined station-area development efforts, eliminating redundancy of tasks and increasing the visibility, scale, and ultimately the effectiveness of the planning operation. As will be seen, many agencies have the ability to act unilaterally in their own self-interests, but they will be handicapped in doing so by a lack of cooperation, and even countervailing actions and policies, of other potential partners.

**8.6. Conclusion**

While past practice has been characterized by fragmented and even duplicated planning efforts, the unveiling of the Special Interagency Committee is a hopeful sign that greater cooperation among planning agencies if forthcoming. The more cooperative the station-area planning process becomes, the more resources and legal authority that will be devoted to the effort. Furthermore, cooperation among levels of government and across functional divisions of government will increase the number of stakeholders whose
concerns are voiced in the development of station-area plans, increasing their chances of implementation. Obstacles created by political animosities, legal restrictions on agencies’ authority, and lack of resources remain a threat to the process.

Additionally, the overall impact of the Tren Urbano station area development in curbing growth on the urban edge is largely contingent on complementary growth management plans to redirect growth inward to higher density infill parcels in existing urbanized areas. In the absence of regional growth management, Tren Urbano may still be effective in reshaping development in the inner city, but it will not necessarily replace automobile-oriented growth in suburban areas. Even within San Juan, Guaynabo, and Bayamón municipalities themselves, there are extensive suburban and rural mountainous districts to the south, providing plenty of space and political pressure for sprawling development. It is unclear whether the interagency committees will be empowered and politically willing to think in terms of regional growth management when developing station-area planning guidelines.

Implementation of a transit retailing strategy, as part of a comprehensive station-area development plan, will require a re-tooling of institutional structures and attitudes that is not inconsequential. The world cities with the greatest success in planned station-area development have exhibited sophisticated degrees of governmental coordination and strict land use planning and regional growth laws. There has not been a precedent for strong planning function in the recent decades in San Juan, when development has been largely laissez-faire under the auspices of politically-connected developers. It remains to be seen whether there is a political willingness to make the institutional transformations necessary for Tren Urbano to make a serious impact on the city’s urban structure.
Chapter Nine

A Transit Retail Development Strategy for Tren Urbano

9.1. Introduction

Having explored the retail environment of San Juan, the relation of Tren Urbano to existing and likely retail activity, and the institutional environment in which station-area planning will commence, it is possible to propose a transit retail development strategy for Tren Urbano. A key long-term objective of the Tren Urbano project is to transform land use patterns and the physical development of the San Juan Metropolitan Area by attracting development to transit nodes in the vicinity of Tren Urbano stations. This will require active participation on the part of the public sector, retooling regulations, procedures, and incentives to promote development outcomes that reinforce the nearly $2 billion transit infrastructure investment.

9.1.1. Role of Transit Retailing in a Station-Area Planning Process

While this research has focused solely on transit retailing, this is only one facet of a comprehensive station-area development program. In a comprehensive planning effort, opportunities for retail development must be weighed against (and in combination with) other land use opportunities, such as residential development, office development, recreational or civic space, and park and ride spaces. However, in planning the retail component of station area development, attention to the needs of retailers and retail developers will ensure that public-sector and community expectations for retail development are realistic given site and market decisions. With an awareness of markets needs, opportunities, and limitations, the physical and policy planning of station-area development can proceed in a way that leverages the maximum possible private investment, and produces the best outcome for communities, transit riders, and businesses alike.
It is unlikely, and probably unwise, for a transit agency to undertake a transit retailing initiative in isolation. However, retailing is a key trip-generating activity and a complement to both work commuting and full-fledged transit lifestyles. Truly transit-oriented communities must provide adequate opportunities for shopping and services if they are to be a solution to automobile congestion and dependence. Station-area planning and design for Tren Urbano must promote the scarce opportunities along the alignment where retail development can flourish, or the land use impacts of the system will be greatly diminished.

9.1.2. Elements of the Transit Retail Strategy

This chapter will outline the key elements of a transit retail development strategy for Tren Urbano, highlighting the following:

- Goals and Objectives of the Transit Retail Initiative;
- Identifying Tren Urbano's Role in the San Juan Retail Market;
- Leadership and Institutional Considerations;
- Policy Reinforcement;
- Phasing and Timing Considerations;
- Transit Retail Competitiveness Initiatives;
- Architectural and Urban Design Considerations; and
- Considerations for Future Alignments and Stations

9.2. Goals and Objectives of the Transit Retail Initiative

Clear transit retailing goals and objectives are required for the initiative to gain legitimacy and support both inside and outside the Tren Urbano project. There are a number of arguments that advocates of transit retailing for Tren Urbano have at their
disposal. Bringing diverse, quality commercial venues within reach of the alignment provides realistic opportunities for non-work travel by transit in many ways:

- **Increasing the density and variety of destinations** within reach of the Tren Urbano alignment, making transit travel a viable alternative for a greater number of travelers and trip purposes;

- Increase the appeal of Tren Urbano’s core work commuting function by providing opportunities for trip-chaining and running errands by transit;

- Providing key **goods and services for residents of new or existing transit-oriented communities**, making a comprehensive ‘transit lifestyle’ more feasible in San Juan;

- Encouraging the development of **needed retail services in central city neighborhoods** through which the alignment passes, where a large transit dependent population lives;

- Providing a ‘**smart growth**’ alternative to retail sprawl, capturing at least a fraction of new regional retail development, and reducing commercial development pressures on greenfield and fringe growth areas; and

- **Increasing security of transit** travel through street-level pedestrian activity, particularly at off-peak hours when most retail activity occurs.

Proponents should make the case that station-area development is a natural extension of the public investment in the Tren Urbano system itself. Transit retailing reinforces the transportation value of that investment by harmonizing urban growth pressures with the spatial and design needs of transit travelers.
9.3. Identifying Tren Urbano's Role in the San Juan Retail Market

It is not possible for Phase I of Tren Urbano to provide a substitute for driving (or bus or público transit) for the majority of shopping travel in San Juan, given the limited geographic coverage of the system and its limited interface with the existing retail sector. A severe curtailment to short-term transit retailing is the Phase I alignment's failure to penetrate major existing shopping nodes, including the major shopping malls and congested, more urban regional shopping destinations like Old San Juan and Condado. This reflects a reasonable decision to provide better service for work commuters to major employment centers. In addition, it has not been established through research that co-location of large, modern retail venues (or even a modern supermarket) with transit stations or intermodal facilities will induce a substantial transit modal share.

9.3.1. Nature of Transit Retail Opportunities

Chapter Seven provides specific information about the key potential retail opportunities at each station. Tren Urbano will initially provide the highest levels of service to pre-existing town centers and urban commercial strips along the alignment, including southern Santurce, Rio Piedras, and Bayamón. In these locations, density, urban design, and travel patterns are naturally complemented by retailers geared toward non-automotive clientele. Thus, these districts are natural focal points for transit retail development in the short-term, before large-scale transformations can be achieved in less-amenable station areas. As market and development conditions permit, new retail development can be pursued in lower-density station areas, perhaps as a part of new transit-oriented neighborhoods or as a freestanding, large-scale retailer not well suited to existing transit-oriented districts.

In summary, Tren Urbano station areas present the following types of retail development opportunities:
Chapter Nine
A Transit Retail Development Strategy for Tren Urbano

- Rider-serving **concessions** inside transit stations (program underway);

- **Revitalization of existing historic town cores** like Rio Piedras, Bayamón, and Santurce, taking advantage of enhanced regional access;

- **Diversification of the Golden Mile office corridor** with increased retail or entertainment-oriented development, serving workers, Colisseum goers, nearby residents, and UPR students;

- **Large-scale mass-retailers and entertainment venues** (with pedestrian-sensitive physical design) on locations with high auto visibility and access, particularly where a ‘buffer’ use is needed near a major highway or arterial roadway; and

- **Neighborhood services for new TOD or existing neighborhoods** with smaller infill parcels and local market potential.

The greater the quality and variety of transit retailing in Tren Urbano station areas, the more feasible and desirable shopping by transit will be for those communities and commuters who can take advantage of the system. Transit retail development will increase the diversity of tasks that can be accomplished by transit, fueling the growth of a ‘Tren Urbano culture.’ Given this, it should be a priority to attract retail development of all scales, so that customers and transit risers at least have the choice of reaching major retail venues by transit if it suits their transportation needs.

Detailed real estate and development studies could assist Tren Urbano station-area planners in identifying both the scale and location of retail development that station areas can absorb, given their physical and competitive circumstances. Retention of a development consultant though the station-area planning process might therefore be desirable.
9.4. Leadership and Institutional Considerations

The institutional environment in which Tren Urbano exists did not evolve to suit the needs of fixed-guideway transit or TOD, but rather the low-density automobile legacy that has been dominant in the explosive post-WW II era of growth. The overall institutional environment and rationale for interagency cooperation were discussed at length in Chapter Eight. In addition, transit retailing and transit-oriented development in general must take into account the following considerations:

9.4.1. Rationale for Increased Interagency Cooperation

As discussed in Chapter Eight, inter-agency coordination increases both the efficiency and effectiveness of all station-area planning, including transit retail development. Coordination maximizes the resources, skill sets, jurisdiction, and legislative powers available to the planning process. It allows global tasks (e.g., system-wide marketing, research, development expertise) to reside at higher levels of government, while maintaining the localized knowledge base and community planning interests at the municipal level. At present these cooperative relationships do not exist in San Juan, though the formation of the Special Inter-Agency and Special Policy Committees in April 2000 may be a step towards more efficient and cooperative station-area planning.

9.4.2. Identification of a TOD Lead Agency

At present there is no clear lead agency or personality to champion the concept of station-area development in San Juan. No agency is a ‘natural’ fit for this role. The Tren Urbano Office, while possessing significant planning and development expertise as well as a system-wide perspective and jurisdiction, does not view itself as a land development agency. Also, its core interests lie with the planning, construction, and operation of the
system itself, and less with its secondary impacts on the urban environment itself. The
Puerto Rico Planning Board has diffused much of its authority to autonomous
municipalities, and thus it does not have a universal planning oversight either. Local
municipalities control most day-to-day zoning and development approval (except for
large-scale projects, overseen by the Planning Board), and have a vested fiscal interest in
station area development, but their jurisdiction and planning sophistication is limited.

The Special Policy Committee and the Special Interagency Committee by PRHTA and
the Planning Board may resolve this leadership vacuum by through their explicit
mandates to address station-area planning and development. There are reasons for
care about these committees, however. As yet it is unclear what powers, legislation,
regulations, resources, and incentives they will have at their disposal to implement their
station area plans. It is also unclear if the committees will have responsibility for
comprehensive station area planning, i.e., the vision for development that the
Committees’ policies and approvals will be geared to protect. Furthermore, station-area
planning under these committees may still take place in the absence of a regional growth
management plan, diluting its effectiveness in revitalizing urban areas and reducing
growth in automobile travel. It is hoped that the answers to these questions will become
clearer as the mandate, policies, and procedures of the committees are formulated over
the next several months.

9.4.3. A Municipal Approach in the Absence of Inter-Agency Cooperation

A ‘second-best’ approach to station-area development is to leverage the self-interest of
municipalities in revitalizing and intensifying portions of their territory along the
alignment. Growth in infrastructure-efficient station areas, especially derelict or
underutilized areas, will boost municipal tax bases and provide attractive new foci for
growth that might otherwise be lost to suburban jurisdictions. This approach several
shortcomings, however. What is good for the municipal tax base may not be what is best
for the Tren Urbano system as a whole, and may even be detrimental to revitalization
strategies in other jurisdictions. Second, the three municipalities along the Phase I alignment also possess substantial vacant and suburban land parcels (particularly in the southern foothill regions). Without a plan to protect these areas, there is little incentive for new growth to occur in station areas as opposed to other available land in the jurisdiction. Also, the level of planning resources for comprehensive planning, urban design, and marketing activities is very limited within municipal governments, even in the largest, San Juan. Finally, isolated municipal-level growth management efforts are most easily bullied by strong landowners who may have significant political sway in local government. To the extent possible, Commonwealth-level agencies such as PRHTA should lend technical, planning, legislative, or political support to achieve mutual objectives.

9.4.4. Intra-Agency Development Policies and Attitudes

The sheer inertia of automobile-oriented development policies and practices will be a formidable obstacle for TOD in San Juan to overcome. Yet even favorable public policies can produce and environment that is too cumbersome, too unsure, and too risky to rouse the interests of many developers. It is necessary for public agencies to evaluate and critique their development approval processes and attitudes for station areas, to minimize artificial barriers to implementation.

Public agencies must put forward an attitude to developers that shows that the public sector knows what is wants to create in station areas, has aligned its policies and procedures to promote those desired outcomes, and that the public sector is ready to assist developers in meeting those needs. This does not mean that the public must cave in to the desires of the private sector. Rather, once the public sector has a vision for TOD in mind, it should do everything possible to encourage developers to choose that outcome over the more familiar urban sprawl paradigm.
Chapter Nine
A Transit Retail Development Strategy for Tren Urbano

Political acceptance of a transit retailing initiative will affect its scope and effectiveness. Rivalries among political factions may lead to the exclusion of key stakeholders in the station-area planning process, and other politically-powerful forces (e.g., large landholders) may object to programs that threaten alterations in existing development practices. Some interests may find that an aggressive station-area development program requires too much 'meddling' in free markets. Public agencies and municipalities, too, may be more or less willing to participate in development planning that they perceive as too far of a departure from their core responsibilities.

9.5. Policy Reinforcement

Just as the automobile environment of today is an alleged product of government policies supporting separation of uses and single-family housing, public policy must be used to work with, not against, station-area development objectives. And, as mentioned in the previous section, all public policies pertaining to land use and development should be reviewed to assess their compatibility with TOD objectives. While this issue is too large to cover comprehensively in this document, the following considerations are especially noteworthy.

9.5.1. Transit System Fare Policy

Presently the fare collection technology and pricing structure for Tren Urbano remain undecided, while a special Tren Urbano Office policy committee explores the issues. Transit retailing is greatly supported by fare structures that encourage freedom and spontaneity of travel—examples include stopovers at mid-trip stations or transfer centers, declining costs per ride for frequent travelers, and short two-way trips that can take advantage of directionless transfers or time-valid fares (refer to section 7.3.3. for a more detailed discussion). More permissive fare structures increase the overall convenience and appeal of transit travel, particularly for frequent, transit dependent or near-dependent
riders. They also expand the potential transit retail market at any given transit station by encouraging mid-trip stopovers by passengers whose destinations are elsewhere.

It is recommended that Tren Urbano adopt a permissive fare structure, both for overall passenger convenience and to promote transit retailing, with features such as:

- **Unlimited Ride Tickets** (NOT ‘X for price of Y’ discounts);
- **Time-Valid Tickets** (e.g., 90 minutes directionless)
- **Directionless Transfers** (preferably free or low cost); and
- **Special Pass Programs for Target Populations** (students, seniors)

### 9.5.2. Overzoning of Commercial Land

Some land use scholars have suggested that an over-supply of commercially-zoned land, particularly in fringe areas and along major automobile arterials, contributes to urban sprawl and commercial over-building by artificially deflating the price of commercial land. The trend may be observed in the San Juan Metropolitan Area, including vast portions of Bayamón and Carolina, where large-scale shopping mall development has exploded in the 1990s. One technique to induce demand for station-area retail space is to reduce the supply of commercial land at competing suburban locations. This policy approach may face stiff resistance or ‘takings’ challenges from the affected landowners, which can possibly be mitigated through transfer of development rights programs.

### 9.5.3. Regional Growth Management

Control of urban sprawl is presently not a hot-button issue in San Juan, and regional growth control measures are not under serious consideration. However, cities like Portland, Oregon have found it a powerful method to justify and encourage transit-oriented development programs. TOS provides the sprawl alternative; regional growth
management provides the constraint on fringe-area growth that increases the attractiveness of station-area development parcels.

9.6. Phasing and Timing Considerations

9.4.1. Retail Development as a Leader or Follower of TOD?

Transit retailing leads to a ‘chicken-and-egg’ dilemma, as transit retail development requires transit shoppers, but transit shoppers must have transit retail development to patronize. A solution to this dilemma is to view the two as part of a self-reinforcing, feedback relationship that starts small and builds as system ridership increases. In this view, retail opportunities increase in an upward spiral as ridership and development acclimate to the presence of the rail transit system in the transportation infrastructure.

In the short-run, ridership will be smallest, before riders and developers have an opportunity to adjust to the presence of the system. At this phase, only existing retail development near Tren Urbano stations (especially in transit hubs like Rio Piedras) and station concessions are likely to service the system. In the medium run, larger numbers of riders will be attracted as more development is built in the vicinity of the system and ridership increases. For some retailers, this ridership may present attractive new market opportunities geared toward transit ridership, particularly in stations with high growth in development or transfers. In the long run, as the system is woven more and more into the transportation network of the city and development of all types increases, larger retailers may be attracted to the market power represented by Tren Urbano. Policies directing growth toward station areas, or localized land shortages in desirable markets may create opportunities to ‘short circuit’ this process, bringing large-scale development within reach of Tren Urbano before developers would otherwise take an independent interest in the market it represents.

1 See Vernez-Mouldon (1999).
At a point of substantial transit-oriented development that has not been measured empirically, and which certainly varies by market sector and rider demographics, transit ridership may theoretically reach a 'critical mass.' When this critical mass has been reached, new retail development will instinctively orient itself to a very large transit market. This is the ultimate goal of transit retailing, though it is unknown if such a state will ever be achieved by retrofitting a contemporary American city with high automobile ownership.

9.4.2. Relative Phasing of TOD Land Uses

The upward spiral theory of transit retailing supports the development of transit-oriented residential and office uses prior to the development of substantial retail development. Retailers will be attracted to the market opportunities represented by the system, and these opportunities are created by building ridership. Work commuters may initially switch to Tren Urbano to avert peak-hour traffic, but once on the system they create a market for complementary types of retail development. Transit ridership built by populations living in transit-oriented housing generate market potential by introducing riders who are inclined to depend on the transit system more and more as opportunities grow. Such riders may use the train for work commutes initially, but are potential customers for a neighborhood retail district or major trip-chaining opportunities along the line.

9.4.3. Development Market Timing

For any station-area development leveraging private development, growth will occur synchronously with larger economic and building cycles. In distressed economic times, when the level of new construction is low city wide, the station-area development program will also suffer. Thus, Tren Urbano’s development program must be prepared to take advantage of fluctuations in the private construction market. Projects may come in
droves during a flush economic environment, dropping to a trickle during a turnaround or real estate glut. Project approvals and reviews should allow station-area projects to be constructed in a timely manner, so that their investors can capitalize on favorable market conditions while they exist.

9.7. Transit Retail Competitiveness Initiatives

At a tactical level, several specific public initiatives can help to promote the competitive welfare of retail development in station areas. These range from simple promotional activities and reduction of development uncertainty to direct intervention in station-area commercial districts.

A natural ally of transit retailing initiatives is an economic development organization or agency (municipality, chamber of commerce, Puerto Rico Industrial Development Corporation, etc.) with a complementary interest in the economic health of a commercial district. The interests and resources of such agencies should be leveraged when possible for station area projects, possibly to the extent that the economic development agency assumes the lead role for a particular project or district.

9.7.1. Marketing Studies and Dissemination of Information

Very little is understood about what will induce San Juan commuters onto Tren Urbano. Even less is understood about the characteristics of those riders which may be of interest to commercial developers or retailers, such as age, income, travel purpose, time of day of travel, former mode of transportation, and shopping locations and habits.

Chicago, Seattle, Portland and a host of other cities have had success in attracting retail development to unconventional or struggling areas by providing basic demographic and economic information, a simple and relatively neutral tactic to generate developer
interest. With Tren Urbano, there is relatively little interface with existing commercial districts and many station areas are expected to undergo major transformations. Thus provision of system and comprehensive planning information would serve to educate the development community and perhaps reduce the uncertainty risk surrounding station area development.

Ridership information may be difficult to predict before revenue service begins, and demographics will likely shift over time as long-term impacts (e.g., development around station) take hold. However it is possible before revenue service to gather certain types of baseline information, such as the profiles and origins of park and ride users and existing station-area districts. Having such information may help to overcome the developer hesitancy that is currently observed as investors wait to see what becomes of the system.

It will be even more useful to augment this pre-revenue information with actual market studies of ridership once the system has opened for service. This is when the flurry of station-area development is likely to begin in earnest, and when empirical observation and survey studies can take place. The Tren Urbano Office or PRHTA should establish itself as a clearinghouse of system-wide information to support development, collecting and disseminating this information through its development liaison.

9.7.2. Early Success Demonstration Projects

Because of the lack of precedent for station-area development and the novelty of the concept within the San Juan development community, it may be useful for Tren Urbano to pursue an early success demonstration project to provide a tangible example of the desired TOD outcome, and as a means of diagnosing strengths and shortcomings in the station-area development program. Media attention, site tours, open houses for communities and real estate professionals, and a projection of energy and excitement will help to draw attention to Tren Urbano’s TOD efforts. (A similar tactic has been used to
generate public interest in Tren Urbano when the first train set was delivered). Naturally, the sample project should be a strong development prospect that is highly likely to succeed, and interesting enough that it attracts people’s attention. The current office-retail development project at the Martinez Nadal station is a candidate for showcasing.

9.7.3. Reinforcing Competitiveness of Existing Transit Retail Development

In additional to attracting new development, transit retail opportunities can grow by strengthening the competitiveness and appeal of existing retail districts and venues that exist along the Tren Urbano alignment. Municipalities, community groups, or business organizations can form business improvement districts (BIDs) to improve the shopping experience for customers, introducing shopping center-like management oversight in retail districts with fragmented ownership (e.g., Rio Piedras). This type of ‘holistic management’ can improve the competitiveness of pedestrian-oriented districts that physically support transit retailing, but are struggling economically. Simply extending smaller businesses’ hours and approving management efficiency can improve the competitiveness of existing independent retailers. The cooperation of local retailer associations and community business interests is essential to the success of these techniques. There is a delicate political balance between reinforcing existing, smaller-scale business centers like Rio Piedras and encouraging larger-scale potential competitors at other locations along the alignment.

9.7.4. Advertising and Shopper Information

Automobile drives take in passive information about the retail opportunities available to them by observing signs, billboards, and facades along highways and major roadways. A similar logic should be applied to Tren Urbano, encouraging shopping by transit by raising awareness of commercial opportunities. System-wide ‘Shop Tren Urbano’ campaigns, brochures, advertisements, maps, and signs will raise awareness of the retail opportunities along the alignment, particularly at stations that are unfamiliar to some
riders. Informational signs space can be offered for rent at transit stations, akin to the blue service guide signs present throughout the U.S. Interstate Highway System. Advertising and informational efforts can be sponsored by Tren Urbano, local business groups, municipalities, institutions, or of course, individual advertisers.

9.8. Urban and Architectural Design Considerations

While good urban design and inviting, quality architecture are central to the success of any station-area development, there are several considerations that are especially important for transit retailing (See Appendix A). In this the construction phase for Phase I, the architectural design of Tren Urbano stations is mostly finalized; however, many aspects of the urban design program for the surrounding station areas is only in a conceptual or preliminary design stage. Additionally, Tren Urbano will require a large amount of remedial work to retrofit districts with poor pedestrian accessibility. Primary design considerations impacting transit retailing include:

- Preserving the integrity of advantageous retail parcels in station areas for commercial uses with **market-informed zoning and urban design**;

- Ensuring that designated commercial land in station areas is **highly visible from station exits and major pedestrian flows**, and preferable also from major automobile arterials, station platforms, and transit vehicles;

- Creating **pedestrian connections that are ‘readable,’ pleasant, safe and inviting.** Retail venues should not be separated from station headhouses by intimidating arterials, gates, walls, or other obstacles; and

- **Avoiding functional and modal conflicts** in station areas through careful placement of access roads and parking areas away from pedestrian paths, and
avoiding placement of parking lots, drop-offs, and transfer facilities between headhouses and surrounding station-area development.

### 9.9. Considerations for Future Extensions

Phase I is intended to be just the first leg of a region-wide rapid transit system, reaching from Bayamón to Carolina, Old San Juan to Caguas. Thus there remains a large level of conceptual planning and study which could be influential in the overall effectiveness of the system of attracting commercial development and passengers. At this level of preliminary planning, important decisions about the location of alignments and stations can have dramatic impacts on the immediate rider appeal of the system (Does Tren Urbano go where people want to go?) as well as its long-term land use impacts (Are the vacant sites near Tren Urbano stations attractive locations for private development?) In retail development particularly, the mere presence of a transit station is an insufficient pull to attract retailers larger than concessionaires.

#### 9.9.1. Alignment/Retail Accessibility Tradeoffs

In Phase I, difficult tradeoffs have to be made between alignment or station location and cost. Tens of millions of dollars in additional cost were created by the decision to tunnel the line into the core of Rio Piedras (as apposed to serving it with a peripheral or elevated station). This decision was made primarily to spark the revitalization of the historic core and attract UPR riders through more direct transit service. On the other hand, the terminus station at Bayamón is located on the very fringe of the downtown core, making access to the core less convenient for riders and perhaps affect revitalization efforts there. A decision was also made to reinforce the commercial core of Hato Rey (destination of a host of work-trip commuters) rather than shopper-oriented destinations like the nearby Plaza Las Americas.
More dramatically, the alignment services the readily-available 65th Infantry corridor between Bayamon and Rio Piedras, even though most surrounding communities have been built out with their backs turned to this corridor, and new commercial development opportunities here are only modest, because of low visibility, poor automobile accessibility, and compatibility issues with surrounding suburban housing tracts.

Tradeoffs between high-accessibility locations and the low-cost right-of-ways provided by highways, railroads, or industrial zones, have been made in dozens of transit alignments in the U.S., sometimes with disastrous impacts on passenger convenience and development potential of those station areas. In these cases, the trains do not ‘go where people want to go.’ In San Juan, the highway fortunately was not constructed, but anticipation of its construction has already influenced urban development of the area. There is little overlap with existing urban districts, and there is a great risk that Tren Urbano alone cannot leverage the regeneration of the out-of-the-way station areas.

9.9.2. Service to Existing Retail Nodes

It should be a priority in future alignments to service commercial districts and major shopping centers to promote access to greater retail opportunity, preferable with clear and direct pedestrian connections between the station and the retail facility. While there are clearly many other important factors to be taken into account at early planning stages—cost, engineering feasibility, community support, system performance—a better end product will result if development consultants are evolved early in the process to assess the TOD implications of alignment decisions.

9.10. Conclusion

A transit retailing strategy for Tren Urbano should be part of a larger effort to promote station-area development, which takes into account the specific needs of competitive
retailing, such as the need for sites with excellent visibility for transit patrons and pedestrians; developers’ needs for information about long-range planning visions for station areas, ridership, and demographic information; and for larger developments, complementary automobile visibility and access. This does not mean that Tren Urbano planners must or should engineer the commercial landscape of station areas; rather, they should be aware of how their plans, policies, and designs help or hurt the competitiveness of private firms that ultimately must be convinced that station-area development is a smart investment. Thus retail-friendly planning is less a checklist of activities than a mentality that takes into consideration the motivations, desires, and needs of retailers and the shopping public.

Tren Urbano will not substitute for the majority of retail shopping trips in San Juan, or even within the alignment, due to geographic limitations and the prevailing development patterns of major built commercial development. Nonetheless, development of transit retail is in the interests of riders, residents of station-area communities, and the agencies who work to make transit and urban communities viable. While encouraging retail development in station areas is a desirable policy goal, there are only a limited number of sites amenable to it, suggesting that careful policy, planning, and regulation are necessary to fulfill the system’s retail potential.

At the present stage of Phase I implementation, the primary transit retailing needs are the following:

- **Enhanced inter-agency and inter-governmental cooperation**, to the extent feasible, to create a unitary station-area development plan which private investors can trust; maximize political and popular support; eliminate contradictory or burdensome policies and procedures; and maximize the efficiency and skill base of planning efforts. The new interagency committees could form the basis for this cooperation;
Chapter Nine
A Transit Retail Development Strategy for Tren Urbano

- A real estate and market analysis of Tren Urbano station areas, to inform the station area planning with market information;

- Formulation of comprehensive station area plans and visions, to formalize station-area development objectives and portray a vision of future conditions;

- Revision of local zoning, development regulations, and approval procedures, to facilitate the development of desired TOD outcomes;

- Formalization and intensification of the developer liaison efforts underway at the Tren Urbano office, to promote station-area development and assist with inquiries and approvals; and

- Initiation of a showcase development project, using early development interest to create a tangible example of TOD and as a mechanism for self-evaluation of the Tren Urbano station-area development program.

Many of the needs of transit retailing are coincident with the needs of transit-oriented development in general—clear development goals and visions, favorable institutional relationships with a strong lead agency and personalities; zoning and regulations biased toward the desired outcomes; quality pedestrian-scale urban design; and, of course, excellent transit service quality. The Tren Urbano planning environment has the benefits of on-staff planning, development, and urban design expertise through the Tren Urbano Office; an emerging framework for interagency cooperation in TOD policy and development approval; and broad public support for the project. Present weaknesses of the project include: remaining institutional and inter-governmental rivalries and mistrusts; lack of a clear long-term vision for station-area development outcomes; policies and regulations that often run counter to the desired outcome; and a general unfamiliarity in the Puerto Rico development community with producing TOD. Reconciliation of these problems is a
prerequisite to any specialized efforts to promote transit retailing or any other station-area land use.

New transit retail development, and revitalization of existing centers, will likely be a follower of other types of station-area development, like housing, offices, and institutional uses, which will drive transit ridership. Small concessions in stations can mobilize quickly in pre-built station spaces, providing localized convenience needs to transit riders. Reinvigoration of existing commercial districts, like Rio Piedras, might be expected in the short- to medium-term, while retail development in brand new TOD neighborhoods (e.g., Rio Bayamón) will take the longest to realize. Co-location of large-scale retailers or entertainment complexes is desirable to bring these typically automobile-oriented retailers within reach of transit, and there are a number of promising sites along the alignment for this type of development (see Chapter Seven). However, proximity to transit may not be enough of a lure to attract major big-box retailers, supermarkets, shopping centers, or cineplexes. In this case local zoning regulations that favor new retail growth in station areas, cost-lowering development incentives (donated land parcels, tax abatements, etc.), or vigorous courting of developers will likely be required.
This Page Intentionally Left Blank.
Chapter Ten

Conclusion:
Prospects for Transit Retailing

10.1. Introduction

This research has examined the implications of innovation and evolution in the retail sector since the 'heyday of transit' 50 to 100 years ago for the transit retailing in a contemporary context. The study was motivated by the following observations:

- **Shopping and recreational travel accounts for 40% of all trips** (more than work trips) and an increasing cause of congestion, but is an understudied topic;

- ‘Trip-chaining’ by time-pressed commuter is increasingly combining shopping trips to work commutes, implying a need to bring retail amenities within reach of transit to maintain its competitiveness as a commuting mode;

- Transit systems in the modern era have experienced **difficulty in effectively serving modern retail venues**; and

- A multi-modal ‘transit metropolis’ must **reconcile the needs of transit with those of contemporary retailing**.

10.2. Challenges for Transit Retailing

The contemporary retail industry is not the same industry that served transit riders in prior eras. Today, retailing operates at a much larger scale, with a wider spectrum of
retail specializations, and higher business volatility that ever before. Shoppers are more pressed for time, have a broader array of tastes in merchandise, and travel longer to meet basic needs at larger retail venues. Even formerly-simple market segments, like groceries, have splintered into specialized categories: convenience markets, ethnic markets, supermarkets, superstores, gourmet and natural foods supermarkets, membership warehouses, and carry-out shops selling prepared food in a thousand cuisines for those who are too busy to cook. Freestanding chain drug stores have become the 24-hour replacements of the druggist and the corner market. Main street hardware stores and butchers in many urban neighborhoods give way to restaurants, cafes, gourmet shops, niche retailers, and specialty shops selling ambiance for those who are less price sensitive.

This is not to claim that retailing and transit are wholly incompatible; on the contrary, retailers are successfully repopulating compact urban areas with evolved retail forms that grew up in the suburbs, often quite successfully. Innovative transit agencies are experimenting with new projects that bring large-scale retailing within reach of transit lines.

However, exploiting ‘niche’ development opportunities and reorganizing the spatial and transportation function of mainstream retailing are two wholly different issues. Many of the ‘benefits’ of transit-oriented development are social in nature (improved equity of access, reduced automobile emissions), have not been substantiated by empirical research, and have been outwardly contested by some scholars. Restricting retailing to transit environments may impose real costs on retailers, developers, and consumers, without offering a commensurate level of benefit. It is necessary to keep in mind some of the challenges that may prevent transit retailing from serving as a perfect substitute for many automobile shopping trips:
10.2.1. The Scale of Contemporary Retailing

Modern retailing operates at a vastly larger scale than in previous eras. Instead of a decentralized system of small, neighborhood-scale businesses providing for basic needs, drawing customers from less than a mile away, mass retail venues service areas of five, ten, or more miles in radius. The emergence of superstores has meant that many customers travel long distances for many basic goods as well as specialty items. Moreover, customer purchases tend to occur in greater bulk at one-stop shopping locations, allowing families to procure a week’s worth of groceries or a month’s worth of household goods in a single visit to a superstore. The low overhead, low prices, and vast selection have made the mass-marketing format the most efficient format in the history of goods distribution—and, if sales volumes may be taken as a vindication, the most popular.

10.2.2. Creating a Sustained Commercial ‘Value of Place’ in Transit Centers

The rapid evolution of retailing—driven in part by automobiles, in part by lifestyle changes, and in part by other business and technological innovations—manifests itself in the rapid turnover and gargantuan scale of many retail facilities. In sprawling commercial environments, as retailers ride and fold, the retail ‘center of gravity shifts up and down retail corridors in jumps that exceed reasonable walking distances. Corporate decisions to enter market areas may lead to temporary ‘overstoring’ situations, with more retail space than an area can support until the weaker competitor is driven out of business. For automobile consumers this is not a problem, because the changes in driving distances are minimal.

In transit retail nodes, however, businesses must be concentrated in centralized locations, with little room for expansion or the introduction of competing retailers. Thus the usual dynamics of contemporary retail competition cannot occur in the same way. The fall of
one business may leave a gaping hole in the commercial core of a transit area, and possibly an obsolete structure that is difficult to renovate. If proximity to transit does not have strong 'pull'; it may be difficult to encourage a new retailer to occupy this space.

10.2.3. The 'Hot Corner' and Problems of Spatial Migration

Even if a 'value of place' is demonstrated in transit nodes, this creates another problem. The automobile, and the resulting freedom of mobility among consumers, allowed retailers to skirt high land prices by decentralizing to less expensive fringe lands. In a transit retail environment, however, retailers and other uses must value proximity to the transit station, and thus rents and land values will be higher here, just as with the 'hot corner' of traditional shopping streets.

In theory, if the transit retail market represented enough buying power, retailers would regain their natural attraction for transit nodes as in the transit heyday. But since most customers will retain automobiles and automobile lifestyles, there will still be a competitive advantage for retailers locating outside of high-rent centers, just as suburban retailers escaped center cities 50 years ago. Lower land prices result in more plentiful and easier parking, more convenient access, wider aisles, and larger in-store inventories. To eliminate these advantages, customers must either lose their preference for these suburban amenities or develop a preference for more compact shopping environments; or, commercial land outside of transit centers must be highly restricted. Neither of these changes is likely to occur without substantial resistance, particularly given that most of the retail environment in the U.S. has been constructed in the exact opposite fashion.

10.2.4. Consumer Drawbacks of Transit Travel

For both routine and comparison shopping, the use of transit as a mode of access imposes strict limitations on consumers in most North American cities. This is due in part to: the limited geographic and time-of-day coverage of transit systems; the longer travel times usually imposed by transit; restrictions on the ability to make spontaneous travel
decisions (especially when comparison shopping); the difficulty of carrying large quantities of goods; and decreased personal comfort. Only in limited circumstances, such as in active and congested inner cities, does transit sometimes offer superior access for choice transit riders.

It is difficult to identify the competitive advantages of transit retailing for the consumer. Transit retailing holds its own in urban centers with congestion and high density, where there is a high impedance to auto travel and thus real advantages to the customer. In the absence of these conditions in low-density cities it is hard to advocate for creation of mobility impediments to favor transit retailing, in the absence of a broader cultural resurgence of urban living. Thus in many cases, transit retailing is not expected to be a leader of urban transformation—rather, the retail industry has demonstrated the agility to adapt to more urban environments if living and lifestyle preferences shift substantial market power to urban areas, and when the aggregate spending power of lower-income communities is more widely recognized.

10.2.5. Summary

Transit retail is not likely to provide a substitute for the bulk of automobile-oriented retailing in American cities without dramatic changes in the density and organization of urban development on a regional scale. The efforts required to induce these changes may be to politically difficult, unpopular, too costly, or too out of proportion with the problems motivating these changes to occur widely. The scale and variety of contemporary retail development is ill-suited to the concentration of development along transit lines and location in pedestrian-oriented districts. It is difficult to demonstrate the tangible benefits of a transit-oriented development alternative to either party in the vast majority of retail transactions.

It is important to remember that many of the difficulties of creating transit retailing today were nonexistent in the heyday of transit, because transit alone defined the outer envelope
of personal mobility. Given current lifestyles, retail distribution patterns, and largely immutable urban development patterns, transit is in head-to-head competition with the automobile, eliminating both retailers' and consumers' needs to cluster. Moreover, in an environment where the automobile choice is available, attempts to force a shift transit retail development are unlikely to succeed. Requiring new stores to locate in dense, hard-to-drive-to locations could simply result in uncompetitive projects with papered-over windows, tarnishing prospects for legitimate transit retail opportunities.

10.3. Market Opportunities for Transit Retailing

The empirical relationships between retail location and transit usage are not well established, particularly in the case of cities transitioning from lower to higher densities. Nonetheless, a number of interesting experiments are proceeding around North America, including: creating new transit-oriented neighborhoods; reinventing urban commercial districts; and co-locating large scale ‘big-box’ retailers with transit stations. Further study of these projects is necessary to quantify their transportation impact and disaggregate the factors contributing to their success or failure.

10.3.1. Convenience and Concession Retail

The most well-established transit retail niche is the provision of convenience retailing for passengers, either through in-station concession spaces or small shops in the vicinity of transit stations. Transit concessions take advantage of the ‘captive market’ of passengers en route, providing basic convenience items or services, enhancing the passenger experience and often generating lease revenue for transit authorities. The strength of these opportunities is proportional to passenger flow passing by the concession space, and thus is highest at major destination stations and transfer centers, as demonstrated by Jones and Doucet in Toronto.

10.3.2. Transit-Oriented Neighborhood Services
Where supporting urban patterns and travel behaviors exist, transit retailing is an important component of a 'transit culture' and communities that offer true modal choices for work and non-work travel. In areas where prevailing densities are high (especially areas constructed in the pre-automotive era), retailing tends to occur on the smaller scales that support pedestrian and transit access. Historical transit hubs retain vitality because of the substantial modal share of modern transit in those areas. While the overall buying power represented by low-income, transit-dependent populations may be low on a per-capita basis, the aggregate spending power is substantial. This has led to increased interest by national retailers in many areas (e.g., Harlem, New York City) who long shied away from inner city markets, which may de-localize the provision of basic services in urban neighborhoods.

It is unclear at this time whether the influx of large-scale stores into more urban areas is altering consumer shopping and travel habits in former strongholds of transit. Because these stores can provide lower prices and greater amenity than neighborhood grocers, city residents may be traveling farther to procure basic goods in larger quantities, stimulating increased automobile travel. As a defensive response to increased mobility and competition, some urban commercial districts such as Manayunk, near Philadelphia, are transforming into specialty shopping or urban destinations. This may enhance the economic vitality of an urban district, but its role as a neighborhood service center is diminished.

10.3.3. Regional-Scale Urban Promenades

Many cities have been successful in revitalizing regional-scale urban shopping districts by promoting their authenticity and pleasant urban amenities to shoppers who may be bored with private shopping malls. Urban areas with unusual architectural merit, human scale, high-quality streetscapes, and an assortment shops and cafes can become new modern promenading streets. While such areas will not fulfill the bulk shopping needs of
customers, they do attract entertainment-oriented shoppers, and expenditures on high value-to-weight merchandise, food, and entertainment can be substantial. The creation of such districts in CBDs or stylish or ‘funky’ neighborhoods clearly takes a concerted effort on a large scale, with the support of municipalities, communities, retailers, and ultimately, consumers. The capacity of a metropolitan area to support these types of districts is finite. In San Juan, for instance, the old colonial city may already serve this role. Furthermore, because these regional districts draw patrons from large geographic areas, often at night and as a recreational outing, walking and transit may not be the primary means of access.

10.3.4. Transit-Oriented ‘Big-Box’ Retail

Co-location of large-scale retail venues providing basic goods, such as superstores and regional malls, suggests that the retail industry is capable of varying architectural forms and densities to fit transit-oriented areas where markets exist. At the present time, however, there is a lack of empirical evidence to show whether the proximity of these venues to transit has a substantial effect of reducing automobile access to these centers. Furthermore, more study is needed to determine the perceived market value of transit access for retailers that may have compelled them to locate in transit-oriented districts, as opposed to financial incentives, strict zoning, or general land scarcity.

10.4. Implementation in Transitional Environments

10.4.1. System Development Decisions Influencing Retail Potential

The retail potential of a transit system is shaped by system design decisions beginning early on in the planning and design process. Influences on retail potential include:
• **Alignment decisions**, especially trade-offs between higher-cost routings through built-up areas and lower-cost but less accessible locations;

• The **location of transit stations**, and the land use, urban design features and potential, and retail competitive landscape in that area;

• System **policy considerations**, particularly the permissiveness of the fare structure;

• **Physical design of stations**, including connectivity and visibility with surrounding lands, and the inclusion of concession spaces;

• **Zoning and master planning of station-areas** in ways that reinforce and enhance the competitive qualities of land parcels;

• **Proactive station-area development initiatives**, using user-friendly zoning and regulations, provision of information or incentives, and maintenance of a development liaison office, so that the desired TOD outcomes are competitive with other private-sector development opportunities;

• **‘Readability’ safety, and attractiveness of pedestrian connections** between the transit station and retail venues;

• **Provision of information, advertisements, signage, and maps** in stations, vehicles, and station areas;

Maintaining an eye toward future economic development in station areas throughout the transit planning and design process will ensure that decisions are made with an understanding of their impacts on trait retailing and other types of TOD. The
information level can be enhanced through inclusion of real estate and development consultants in the transit planning process.

### 10.4.2. Transit Retailing: Leader or Follower of TOD?

Because opportunities of the transit retail market are measured in terms of system ridership, it is reasonable to expect that retail development in the initial phase of system operation will be limited, restricted to concession operations and existing retailers in station areas. As ridership volumes and profiles become more certain, and the quantity of transit-oriented office and residential development increases, new retail venues are more likely to be attracted to the market potential of retail development. This upward spiral will require transit retailing to grow incrementally, in a feedback relationship with ridership and overall TOD growth, rather that in great leaps.

### 10.4.3. Building a Transit Retail ‘Critical Mass’

As with other forms of transit-oriented development, there are unanswered questions about the ‘critical mass’ of retail development necessary to generate the spontaneous interests of customers and investors. The growth potential of transit retail will be determined by the amount of incremental new growth or turnover that can be attracted to station areas, suggesting that the transition to a ‘transit retail metropolis’ will be a long and gradual process. This raises difficult questions about how to get developers and consumers to take interest in transit retailing in the interim.

### 10.5. Institutional Considerations

Institutional environments that support comprehensive planning and station-area development in general are the best equipped to undertake transit retail development strategies as a part of a broader transit-oriented development program. In both planning
and implementation of transit retail projects, broader coalitions of diverse agencies and levels of governments expand the pool of potential resources, technical capabilities, regulatory powers, jurisdictions that may be dedicated to the effort. For example, local jurisdictions may have control over zoning or their own growth management plans, while a transit agency or regional entity is more suited to city-wide or system-wide analysis or policies, including regional growth management and transportation investment frameworks. At the same time, the positive impact of a single enthusiastic and knowledgeable individual as a champion of comprehensive planning and station-area development should not be underestimated.

In the absence of a broad transit-oriented development alliance (or in the presence of a weak or ineffective alliance), solitary entities or localized coalitions may still produce viable projects on a smaller scale. Individual municipalities, for instance, have a fiscal incentive to broaden their tax base with new development, particularly high-tax commercial development. If a municipality is land-constrained or is seeking to revitalize economically-depressed neighborhoods, it may try to capitalize the accessibility gain from new investments to catalyze new investments. Fragmented TOD approaches, however, may lead to redundant planning and advocacy efforts across the system, reduce resources available, and lack a system- or city-wide perspective to effectively channel growth toward stations.

10.6. Proactive Strategies to Promote Transit Retailing

10.6.1. A Retail-Sensitive Approach to Transit System Development

The challenges of community-building implicit in transit-oriented development require a set of skills much broader than conventional transportation infrastructure projects, particularly when the existing urban form of station areas is not well suited to transit or pedestrian travel. Transit retailing is simply a slice of this overall challenge, requiring new skill sets to recognize fine-grained interactions of transit systems and shopping
behavior. With an understanding of transit retailing needs and opportunities, it is possible to design system features, urban environments, policies, and institutional frameworks in a way that promotes the desired outcomes. The remainder of this section summarizes methods that transit and other planning agencies can utilize to fulfill the maximum commercial potential of station areas.

10.6.2. Understanding the Transit Retail Market

Any station area development program should make an attempt to understand and quantify characteristics that define the development potential of stations. This includes an understanding of the transit ridership (boardings volumes, rider profiles, trip purpose, destination, and time) as well as the real estate characteristics of parcels that shape their value (demands for various types of housing, office and retail space needs, accessibility to station-area parcels, etc.). Market studies assist in TOD in two ways. First, they help agencies develop station-area master plans and guidelines (land use, square footages, etc.) in a way that is vindicated by the market. Second, they provide an informational base that public authorities can use to promote TOD within the development community, respond to development inquiries, and proactively seek development partners (see below).

10.6.3. Identifying and Reinforcing Transit’s Competitive Assets

With a compilation of basic market information at hand, public agencies can analyze the features of station areas that can provide competitive advantages for retail developers. Examples include historic town cores with new levels of regional accessibility, location of large land parcels with high automobile and transit access, or niche markets in institutional areas or business districts for certain types of services. In station areas where large-scale land use transformations are anticipated, having a solid understanding of prevailing market conditions and retail fundamentals can assist in creating urban design plans with retail spaces that have the maximum chance for economic success. It
may be useful to retain a real-estate development consultant in the development of station area plans and master-planned projects.

Existing commercial districts of transit-friendly design may have suffered from years of neglect and uncompetitive business practices. Involvement of local non-governmental advocacy groups, such as community or business associates, can work to reverse these impacts through competitiveness seminars for small businesses, streetscape and façade improvements, formation of Business Improvement Districts (BIDs), improved security, or area-wide advertising and promotion.

10.6.4. Development Advocacy, Outreach, and Information

Information and publicity can generate development interest in station areas, while reducing uncertainties resulting from a lack of information. The novelty of transit-oriented development suggests that a proactive public agenda to raise awareness in the development community of Tren Urbano’s design philosophy and mobility objectives. In any particular transit system or station area, developers must be alerted to the opportunities that exist there. If an area is slated for large-scale revitalization or transformation over time, it is valuable to provide a visualization of the build-out development plan for the area (while still remaining flexible enough to leverage the creativity and market sense of the private developer). Information collected from market analyses can be used to convey a sense of the traffic flows generated by the transit system.

Public agencies have had success by providing a one-stop information clearinghouse for station-area development, including regulations, development approval procedures, and project profiles (local or distant). Some transit systems have designated full-time development coordinators to field development inquiries and assist with projects in the

---

1 See Robertson (1999) for a summary of objectives and techniques for small-city business revitalization in American cities.
pipeline. This coordinator can arrange outreach activities such as presentations at real estate industry functions and prepare informational materials. Appendix B provides examples of materials that planning agencies in U.S. cities have used to help convey information to the development community, and to present a visualization of the intended outcomes.

10.6.5. Development-Friendly Approval and Permitting

Public agencies must make station-area development as easy as (or easier) than competing alternatives on suburban greenfield sites unencumbered by timely design reviews, difficult guidelines, or ambiguous development requirements. Re-zoning of station-areas to permit transit-oriented densities and design features is essential, but it is not the only consideration. Developers need assurance that developing in a station-area will not add excessive delays or development costs to their project (which have detrimental impact on developers’ risks, costs, and their ability to ‘time the market.’), or that their proposals will be subjected to arbitrary scrutiny or rejection. Design requirements should allow flexibility and creativity on the part of the private sector, but regulations for streetscape amenities, densities, setbacks, etc. should be clear.

10.6.6. Showcase Projects

A difficulty in cities with new rail starts is the unfamiliarity of local developers (or even planners) with the design philosophy and objectives of transit-oriented retail design. Agencies can educate the development community, and also analyze their own ability to accommodate station-area development, by engaging in early ‘showcase projects.’ Such a project should include and attentive walk-through of the design and approval on a parcel with high probability of success and where early development inquiries have expressed interest. The finished project allows other prospective developers to see a concrete example of the desired end product. Similarly, public agencies can provide project and contact information for representative projects in other cities, so that
prospective developers can examine other built examples that they may want to emulate locally.

10.6.7. Bridging Financial Gaps

Developers may claim (often rightly) that the special requirements of station-area design or approval impose additional costs or demand investment risk premiums from lenders to be worthwhile. Real or in-kind development incentives may be used to help shrink the financial gap created by such situations. Some cities have offered development ‘carrots’ such as property tax abatements, low-cost housing tax credits, enterprise zones designations, free or reduced-cost infrastructure improvements, loan guarantees, financing interest subsidies, or other techniques to encourage station-area development. Clearly, this approach requires a certain level of development savvy in the public sector to assess whether these needs are legitimate. Development authorities in cities like Boston, New York, and Portland have employed or hired development experts to assist in negotiations, and have learned through experience on sensibly assessing shortfalls.²

10.6.8. Reaching Out to Transit Shoppers

The passive transferal of information through advertisements and signs performs the same informational and promotional functions on transit as do billboards and roadside signs for motorists. Station platforms, concourses, exits, fare cards, maps, and the vehicles themselves provide hundreds of surfaces for advertisements and directional signage to alter customers of the ever-changing shopping opportunities at stations. This is particularly useful in circumstances where a customer is unfamiliar with a particular station or is looking for a retailer for the first time. A ‘wayfinder’ sign system with rentable placard spaces (similar to the successful blue services signs on Interstate

highways) may be an effective way of both informing and guiding customers about the retail opportunities near stations. Vermont has developed an even more detailed uniform guidance signs as an alternative to billboard advertising, communicating a tremendous amount of information about commercial opportunities that may not otherwise be apparent to passers-by.

10.7. Private-Sector Reinforcement of Transit Retailing

An entire culture of shopping and selling in transit-oriented development was largely lost in the course of the twentieth century, though it is being reborn and reinvented in some places around the world. Private-sector strategies, particularly those geared at saving consumer's time or money, or increasing convenience, can leverage enormous amounts of capital and creativity from the retail industry. Examples include:

- The emergence of internet commerce and the resulting need for unattended home delivery has led to development of combination-locked home delivery boxes, some with their own refrigeration and freezer compartments;

- Many urban grocery stores offer delivery of purchases for a small fee, for customers who do not own cars or use them for shopping;

- Home Depot stores rent small flatbed trucks to customers for self-delivery of bulk purchases; and

- Urban department stores often provide small disposable handles to allow customers to carry medium-sized boxes like a suitcase. They have also long offered home delivery and mailing services for bulky purchases.
The impact of Internet retailing could profoundly reduce the need for large-quantity commodity purchases at ‘big-box’ stores. Rather, these goods could be ordered online (even with automated, periodic re-ordering) and delivered directly to the home. This would allow retailers to focus more on impulse purchases, convenience items, or fresh and prepared goods that consumers prefer to touch, see, and smell. Such a retailer could more easily fit into a station-area location, satisfying shopper’s immediate needs without the bulk or inconvenience of picking up large quantities of mundane merchandise. Such an arrangement could enhance the feasibility of neighborhood ‘main street’ shopping with a renewed focus on ambiance and leisure, without sacrificing the consumer benefits of the retail evolution in the automobile era. A number of more affluent urban neighborhoods in the United States already appear to be heading this direction, though bulk purchases still occur predominantly by automobile rather than by fiber optics.

10.8. Opportunities for Future Research

The opportunities for future research into transit retail, and station area development in general, are rich and urgent. This section will look first at general research needs, followed by needs related specifically to Tren Urbano.

10.8.1. General Research on Transit Retailing

There is a scarcity of research into transit shopping behavior and retail development in transit station areas, particularly in comparison with residential and office development. Many of the most interesting developments in transit retailing design are relatively unknown among transportation practitioners, and the benefits of ‘iconoclastic’ station-area retail projects of recent years are not quantified. As a result, planners and transit agencies are deprived of a solid research basis with which to justify the pursuit of a transit retail program.
The following areas of research are or particular importance to understanding the potential of transit retailing:

- Cataloging and transportation analysis of traditional and iconoclastic transit retailing projects;
- Determination of real and perceived benefits and drawbacks of transit retail for consumers, developers, retailers, communities, and transit agencies;
- Behavioral factors and attitudes behind shoppers’ use or disuse of transit for shopping activity;
- Identification of market segments where transit retains a high mode share in access to retail venues;
- Identification of physical design and land use factors influencing the use of transit for retail shopping; and
- Analysis of transit retailers’ and shoppers’ strategies for adapting to the unique constraints and opportunities of car-free shopping.

10.8.2. Tren Urbano Research

Within the Tren Urbano Project, there is considerable uncertainty about how best to proceed with the implementation of a station-area development strategy. Further research can help to clarify the issues, opportunities, and obstacles involved. Additionally, this study has identified a number of key opportunities at the station level that deserve a more detailed examination.

10.8.2.1. Institutional Arrangements for Station Area Development

There is a need for greater research on the institutional arrangements required for implementation of station-area plans and development, including experiences in other cities and their relevance to San Juan. In particular, it is necessary to identify the lead agency or agencies to take primary responsibility for ‘championing’ the station-area
development program. Other agencies, public and private, can bring various legal, financial, or in-kind resources to the station area planning effort. Further research is required to identify what resources these entities can offer, their rationale for involvement relative to their primary mandates, and their role in a Tren Urbano development coalition. The work of Park and Ardila provides a foundation for this institutional analysis. 3 A 'scenario' analysis could be used to compare the benefits and drawbacks of different institutional arrangements for Tren Urbano.

An institutional analysis might include:

- A review of the vested interests of each entity in the success of station-area development;
- Arguments in favor or against their involvement in station-area planning;
- Identification of the planning resources, jurisdiction of each agency or private, and the value its involvement brings to the station-area planning process;
- Identification of interests or mandates that might compete with station-area development for loyalty or resources in each agency;
- The potential role of each entity in a Tren Urbano development coalition;
- Identification of a leadership agency for station-area development;
- Benefits, requirements, institutional location, and timeline for creation of a Tren Urbano development liaison office.

It is very important to identify the powers and resources that agencies can contribute to insure that the coalition has the ability to fulfill its mandate through real development, as opposed to simply producing plans that have little influence on the city's growth.

The threat remains that an empowered development coalition cannot be created for Tren Urbano. Thus, this analysis should include a 'second-best' study of the capabilities available to agencies acting unilaterally or in localized coalitions. If this approach

3 Park (1999) and Ardila (est. 2000).
substantial diminishes the effectiveness of the station-area planning process, the findings may be used as a rationale to support the formation of a more integrated approach.

10.8.2.2. Review of Development Approval Practices, Regulations, and Incentives

Having identified potential institutional arrangements and the constraints of the local market, an in-depth analysis of planning tactics to promote station-area development is feasible. Research can identify a policy ‘toolkit’ for a Tren Urbano development coalition appropriate to its legal and institutional environment.

This tactical review should include the following elements:

- A review of existing development regulations, zoning, and development approval processes and procedures in each of the constituent municipalities;
- Identification of barriers to station-area development posed by existing regulations, procedures or competing incentives, as well as means to correct or minimize them; and
- Identification of relevant and useful development incentives which entities within a coalition might use to entice station-area development.

An interesting approach to this problem would be an approval process ‘walk-through’ of a hypothetical station-area project, evaluating the performance of the process and identifying bottlenecks and areas of improvement.

10.8.2.3. Transit Market Analysis

4 Planck (1998) developed a transit marketing strategy for Tren Urbano geared towards building ridership


**Real Estate and Market Analysis:** Attempts should be made to better determine the true market value of lands in Tren Urbano stations, based on the real estate situation in San Juan and a comparison with similar station areas in systems elsewhere. Market data on the full potential of the Tren Urbano stations will give guidance the planning process, ensuring that that proposed development plans meet market needs. It will also endure that station area development is not undersold, by creating a development plan that does not capture the full economic and access potential of the stations.

**Ridership Analysis:** There remains great uncertainty about the ridership volumes that Tren Urbano will attract, as well as the socioeconomic profile of these riders. Greater information about the ridership of Tren Urbano could support development efforts (particularly retailing) by giving developers a better sense of the transit market they are gaining access to by investing in station areas. It can also help to determine general marketing strategies for the system, including target audiences, origins and destinations of trips, etc. Clearly, there is a practical problem in assessing ridership characteristics before the system opens for revenue service, but periodic monitoring and analysis of the ridership base should be a priority once service begins.

**10.8.2.4. Station-Level Planning, Market, and Development Analyses**

Key station areas, such as Bayamon, Rio Piedras, Pinero, and Hato Rey, and Sagrado Corazon have complex and significant development possibilities, and further in-depth study of the market potential, development potential, and urban design opportunities in these locations is warranted. Such a study has been completed for Martinesz Nadal\(^5\), and an urban design study is currently underway for Cupey.\(^6\)

Relevant station attributes to consider include:

\(^5\) Deeming (1999).
\(^6\) Guzmán-Torres and Peña Rivera (est. 2000).
• Inventory of station-area assets and major trip attractors;
• Analysis of local market conditions (real estate, retail, office, housing) and factors influencing them;
• Assessment of stakeholder interests in the area, including the needs and desires of local residents;
• Review of existing or proposed development and planning initiatives;
• Determination of an 'optimum' land use mixture and development scale;
• Development of a station-area vision, implementation and financing strategy, and development timeline.
Appendixes

Appendix A:
Design Considerations for Transit Retailing

Appendix B:
Sample Informational Materials for Transit-Oriented and Urban Development

Appendix C:
Retail Analysis of Individual Tren Urbano Station Areas

References
Appendix A

Design Considerations for Transit Retailing

A.1. Introduction

This appendix provides illustrations of some innovative transit-oriented retailing projects, and highlights some physical design considerations that are particularly important for in transit retail environments. This topic is too broad to be addressed fully in this document, so the scope will be limited to a few key retail projects and design considerations. For a fuller discussion of urban and architectural design issues, see Calthorpe (1993). For further examples of retrofitting large-scale superstores into pedestrian-oriented environments, see Beaumont (1996).

The remainder of this section is divided into two parts. Section A.2. shows some innovative transit-compatible examples of large-scale and corporate-controlled retail venues, formats more typically associated with automobile-oriented suburbs. Section A.3. illustrates four specific elements of physical design that are crucial for transit retailing: visibility from stations and transit vehicles; quality and legibility of pedestrian connections; co-existence of pedestrians, transit, and automobiles; and provision of customer shopping information and guidance.

A.2. Non-Conventional and TOD Applications of Large-Scale and Chain Retailers

A.2.1. Regional Malls

Lloyd Center, Portland, OR: Figures A-1 through A-4 illustrate the Lloyd Center regional mall, with approximately 1.5 million square feet of retail space in a mixed-used
urban area about 2 miles from downtown Portland. The original mall was constructed in the mid-1960s, and renovated and expanded in the early 1990s. It is near three MAX light rail stations and several bus routes, and is also extensively serviced by sidewalks and bike routes.

The project is innovative for its urban adaptation of a suburban shopping mall, bringing building entrances up to the curb and placing parking in structures or on the opposite side of relatively narrow urban streets. Complementary office, hotel, and residential uses provide a lively and active environment every day of the week.

Figure A-1. Pedestrian-oriented entrance to Lloyd Center featuring high-quality streetscape amenities.
Figure A-2. Chain-store elements of the surrounding commercial strip are also pedestrian-accessible.

Figure A-3. The orientation of buildings in the Lloyd District, with parking at the rear or the side, supports access by all modes of transportation.
Figure A-4. A view of the adjacent MAX LRT line and a park-like station setting. The vintage trolley is a shopper shuttle that links the Lloyd District to downtown Portland.

**Metrotown, Vancouver, B.C.:** Canadian cities feature numerous innovative transit retail projects. Among these is a major regional enclosed mall complex in Vancouver, British Columbia, called ‘Metrotown,’ along the SkyTrain ALRT system at a station of the same name. Similar in scale to Lloyd Center, Metrotown (Figure A-5) is another example of how major existing commercial centers can be adapted to complement a rail transit system. A second-floor pedestrian bridge (see Figure A-17) provides a direct connection between the transit station and the mall, as well as a major bus terminal. Diverse office, hotel, residential, and entertainment land uses support the retail function of the center. Parking is provided in surface lots and garages, but does not interfere with pedestrian movement.

A very similar project exists in suburban Toronto, Ontario at the Yorkville station on the University-Yonge subway line.
Figure A-5. Plan view of the Metrotown complex, with the SkyTrain station, pedestrian link, and bus exchange at the bottom center.

A.2.2. Superstore Power Centers

‘Big box’ retailers are perhaps the epitome of automobile-oriented retailing; however, saturated suburban markets and changing consumer lifestyles have led these retailers to experiment with innovative formats and locations, including such transit-oriented environments as midtown Manhattan, where K-Mart, Marshalls, Toys ‘R’ Us, and several others have established a presence.

Dadeland Station: One very innovative project of this nature is ‘Dadeland Station,’ a vertically-stacked ‘power center’ of superstores located on a 7-acre, joint-development parcel next to the Dadeland North metro station. According to the Urban Land Institute,
it is also the most profitable store in southern Florida for the retailers involved. The author is not aware of any studies examining the modal share of shoppers patronizing this center.

Figure A-6. Dadeland Station from the Metro platform. Note the direct, covered pedestrian walkway from the station to the center. Parking is provided in a stacked garage, and auto traffic does not interfere with pedestrian movements.

(Photo: K. Kruckemeyer)

Figure A-7. View of the main concourse. (Photo: K. Kruckemeyer)
A.2.3. Downtown Specialty Malls

The trend toward urban retailing, combined with concerted efforts to reinvigorate central business districts, have resulted in projects that amalgamate shopping-center efficiencies of scale and management with the qualities that make urban shopping interesting and delightful. Figures A-8 and A-9 show two upscale specialty malls that bring national ‘mall’ retailers into more urban environments. Façade articulation makes these large, continuous structures appear to be constructed of individual buildings of varying styles.

Figure A-8. Seattle’s downtown has once again become a premier shopping destination due to a strong economy and an aggressive public initiative. The project on the left is a single, block-long structure. It was constructed by the same developer as Boston’s Copley Place, but is more open toward its surrounding urban environment.
A.2.4. Urban Entertainment Centers

As some retailing becomes more explicitly liked with entertainment, urban areas have been taking advantage of the trend through the revitalization of grand urban ‘promenade’ districts (e.g., Boston’s Back Bay or Chicago’s State Street), as well as more self-contained entertainment centers. The ‘Denver Pavilions’ project in Figure A-10, on the 16th Street Transit Mall in downtown Denver, contains 350,000 square feet of theme retail and entertainment venues such as theaters and arcades. The combination of urban location and high value-to-weight and service consumption is particularly amenable to transit. Variations on this theme have been popular in University areas, geared toward a student clientele (e.g., Ohio State University, Columbus).
A.2.5. Supermarkets and Neighborhood Shopping Centers

Food and basic services have always been a part of urban neighborhoods. However, as stores grew larger and larger and more commerce shifted to suburban shopping centers, most transit-oriented urban neighborhoods either survived with diminished commercial importance, or shifted away from goods toward services and dining. Increasingly large-scale community retailers, such as modern supermarkets and shopping centers, are infiltrating urban neighborhoods.

There are now perhaps thousands of examples of chain drugstores, supermarkets, booksellers, and other community-scale retailers in transit-oriented neighborhoods of North America, particularly in cities where the economy is strong, planning practices are innovative, and middle-class re-population of urban centers is significant. The lure of untapped markets in cities has tempted many retailers and developers to break away from suburban molds—or, sometimes, transplant inappropriate suburban models into pedestrian neighborhoods.
Figure A-11 shows a Ralph’s supermarket in downtown San Diego, CA, of approximately 70,000 square feet. A downtown residential explosion fueled the need for a grocery provider in this area. This store is located inside the LRT ‘loop’ through the downtown. Parking is provided in a subterranean garage, and an innovative inclined conveyor belt transports shoppers and their carts from the store to the garage. The loading dock is in the near corner, and is concealed from view when not in use by a large overhead door. The Spanish Revival structure in the background is Horton Plaza, a landmark downtown mall that is a major attraction for tourists and residents alike. The entertainment and dining of the historic Gaslamp Quarter, two blocks behind the mall, rounds out the retail amenity in this vibrant neighborhood.
Figure A-12. University Village is a new open-air shopping center for a relatively affluent neighborhood in Seattle. The developers sought to create a ‘third place’ that would act as a neighborhood center (albeit in a controlled atmosphere) encouraging shoppers to shop, relax, and just ‘hang out.’

(Photo: Urban Land Institute)
A.3. Key Elements of Physical Design for Transit Retailing

A.3.1. Visibility of Retailers from Transit Stations and Vehicles

More than any other business, retailers depend upon convenient customer access and a high profile in order to be a commercial success. In automobile environments, passive advertisement and education about retail opportunities occurs when motorists drive past, even if at that moment they are not shopping. Transit can emulate this environment by ensuring that retail venues are visible to pedestrians as they leave station headhouses, and preferable when they are on board trains or on station platforms, too. Tren Urbano's elevated and at-grade alignment segments allow for substantial exploitation of this advantage. Additionally, retailers will also prefer sites with high automobile visibility, particularly large-scale retailers that only draw a small fraction of their patronage from the transit system. Zoning, urban design, and station-area planning should take these competitive considerations into account when planning for commercial space.

Figure A-13. In the Dadeland Station project discussed earlier, visibility from passing trains is a major advantage for educating passengers about this major retail opportunity, especially for those unfamiliar with this station. (Photo: K. Kruckemeyer)
A.3.2. Quality and Legibility of Pedestrian Connections

The transit shopping trip does not begin or end at the faregate. Shoppers must negotiate the pedestrian path between the station and the retailer, which in sprawling commercial strips is a major deterrent to travel by transit. Even when distances are not long, security and lighting, obstacles like gates and busy roads, maintenance, or simple lack of interesting streetscapes detract from the appeal of transit travel. Lack of clear, legible pedestrian connections discourage spontaneous patronage by those unfamiliar with a particular station, and can be confusing, frightening, and frustrating for transit patrons. Pedestrian connections to retail venues must be safe, inviting, of high quality, and easy for newcomers to recognize and follow.
Figure A-15. At South Miami, patrons for the Sunset Village Mall walking from Metro must follow a convoluted and unmarked route with an unpleasant and distinctly ‘second-class’ feel. The final leg through the parking structure sends the message that driving is the way that one is *supposed* to reach the shopping center.

(Photo Series: K. Kruckemeyer)
Figure A-16. In hot or rainy climates, a simple canopy like the one at Dadeland Station enhances the sense of dignity associated with transit travel. (Photo: K. Kruckemeyer)

Figure A-17. Where traditional streetscapes are infeasible or undesired, direct pedestrian connections as at Metrotown provide a high level of service for pedestrians, and a buffer from weather or high-traffic roadways.
Figure A-17. This private space at the Sunset Village Mall in Miami offers a playful environment that makes experience the space on foot interesting and pleasant. (Photo: K. Kruckemeyer).

A.3.3. Co-Existence of Pedestrians, Transit, and Automobiles

Large-scale retailers are high-volume businesses. Often, consumers will wish to access the center by automobile, especially if transit service from their origin is inconvenient or nonexistent, if they plan to make a large, bulky purchase, or if they are traveling with infants or small children. Any large-scale retailer or their lenders in a moderate-density city like San Juan would require ample parking as ‘insurance’ against a transit market that failed to materialize.
Furthermore, station areas can be busy and congested places, with drop-offs, bus transfers, and high pedestrian activity. It is therefore necessary to reconcile the needs of retailers for convenient, multi-modal access with the constraints that are likely to exist in station areas.

Experiences in urban retailing projects and TOD developments are leading to greater public and private expertise in this area. Figures A-19 through A-21 show examples of how retailers can accommodate the auto, without letting the automobile dominate the footprint of a land parcel or hinder pedestrian and transit movements.

Figure A-18. The front of this Zupan’s market in the Hawthorne section of Portland, OR, is set against a pleasant sidewalk to provide easy pedestrian, transit, and cyclist access. The project is a manifestation of Portland’s aggressive program to promote high-density, mixed-use development...
Figure A-19. Meanwhile, motorists can access the Zupan’s market through a separate door from the stacked parking garage. Parking is also provided here for the residences on the second floor.

Figure A-20. Ramped parking set off to the side permits easy pedestrian access and mid-block passage at this grocery store in the Portland Lloyd District.
Figure A-21. A two-level Fred Meyer superstore, over 100,000 square feet, brings mass retailing to a major pedestrian strip and bus interchange at 39th and Hawthorne Aves. in Portland, OR...

Figure A-22. ...Parking and loading is provided at the rear of the store on a surface lot and on half of the roof of the first level. Multiple entrances with separate checkouts allow the store to have three exits: one facing the street at the front, and one each for the upper and lower parking lots.
A.3.4. Provision of Customer Information and Guidance

Transit systems should provide directional information, maps, and guidance about the ever-changing retail opportunities in station and transfer locations. Naturally, provision of advertising opportunities in transit vehicles and stations (Figure A-22) is an effective way for transit retailers to reach their target audience. At the station level, wayfinding guidance signs similar to those found along U.S. Interstate highways or the byways of billboard-free states like Vermont can offer both information and directions to potential customers. Guidance information is preferably a complement, not a replacement, for visual contact and legible physical connections for pedestrians.

Figure A-23. Traditional advertising opportunities such as this poster for Metrotown in a SkyTrain station provide the analog of billboards and roadside signs for transit systems. The poster provides transit-specific directions to get to Metrotown, including bus routes and the name of the SkyTrain station.
Figure A-24. This mitigation sign near the Rio Piedras tunnel construction site in San Juan alerts residents that local businesses are open during construction. A similar but more refined sign system, with space leased to local merchants, could alert riders to nearby shopping opportunities.
This Page Intentionally Left Blank.
Appendix B

Sample Informational Materials for Transit-Oriented and Urban Development

Transit-oriented development, particularly in cities with new rail transit starts, is often disadvantaged by the difficulty of communicating visions of future station-area development to developers, investors, politicians, and the general public. This is because of general developer unfamiliarity with TOD, as well as a lack of awareness of future visions for station areas that may be slated for radical transformations. Furthermore, many TOD, redevelopment, or urban infill projects require developers to consider unconventional development locations or formats. Many cities and transit agencies have reduced these disadvantages through informational and promotional materials that raise awareness of transit-oriented development opportunities. Similar documents may be useful for Tren Urbano to reach out to the development community in Puerto Rico.

This Appendix contains samples of simple informational devices that help potential investors, tenants, and even residents envision the opportunities and changes that transit projects can bring. Facts on land availability, local demographics, maps, images, renderings, and text descriptions are all used to help others visualize what has not been constructed, as well as to sell the advantages and amenities that non-conventional development locations possess.

Figures B-1 through B-7 contain sample informational materials from the following:

- ‘Retail Chicago’ program for State Street in downtown Chicago;
- Dallas Area Rapid Transit light-rail system in Dallas, Texas;
- St. Clair County, IL extension of the St. Louis MetroLink LRT;
- Southwest Corridor rapid transit and commuter rail project in Boston, MA; and
- Central Florida ‘Lynx Lyne’ LRT under design in Orlando, FL.
Figure B-1. Demographics and Information Sheet for the 'Retail Chicago' Program (City of Chicago).
Figure B-2. Excerpt from Dallas Area Rapid Transit (DART) Station Information Brochure (DART).
Figure B-3. Excerpt from Dallas Area Rapid Transit (DART) Station Information Brochure (DART).
Figure B-4. Sample from a Development Marketing Brochure for the St. Louis MetroLink LRT Extension into St. Clair County, IL (St. Clair County Transit District).
the Bromley-Heath housing development. The fourth will be located between Washington Street and Harrison Avenue (near Eustis St.) on Parcel No. 8. It will be an historic park embracing the John Eliot Burying Ground (1633), Josiah Cunningham House (1784), the Doggett Tavern (1768) and the Eustis Street Fire House (1859).

---

**Figure B-5.** Excerpt from *Southwest Corridor Development Plan*, Boston, MA. (Charles Hilgenhurst and Associates, 1979.)
Figure B-6. Illustration from the Central Florida Rail Design Manual, Orlando (Glatting Jackson).
Figure B-7. The Central Florida LRT planning process in Orlando has made extensive use of maps and illustrations to convey a sense of the desired station-area development outcomes along the alignment (Glatting Jackson).
Appendix C

Retail Analysis of Individual Tren Urbano Station Areas

C.1 Introduction

This appendix contains a detailed analysis of each station in the Tren Urbano Phase I alignment. It uses the 5-factor methodology and evaluation criteria described in Chapter Seven. The conclusions of this analysis are also contained in Chapter Seven. Refer to Chapter Six for a map of the Phase I alignment and stations.

The analysis begins at Bayamón station, and proceeds east and north, ending at Sagrado Corazón station.

C.2 Analysis of Station Areas

C.2.1. Bayamón

1. Location and Overview: Bayamón station is located on the fringe of the vibrant, mixed-use historical town center, next to a major regional thoroughfare, P.R. 5 and in close proximity to another major arterial roadway, P.R. 2. The station site is peripheral to the pedestrian-scale town center, but is within a 5-minute walking distance of its central plaza. It is located in the Municipality of Bayamón, and serves as the western terminus of the Phase I alignment.

2. Access: Its proximity to P.R. Highways 2 and 5 give the station unusually convenient automobile access for Phase I station; this access is expected to be exploited frequently by suburban park-and-ride commuters, especially from the north and west of the city. The station will also serve as a bus transfer hub for connecting
AMA and Metrobus Routes. The two existing public terminals, on the opposite end of the town center, are expected to relocate to the station area, with an intermodal center that consolidates bus and public service. Pedestrian access is excellent within the historic core (though sidewalks tend to be narrow), but access across and beyond the major thoroughfares is much more difficult, with wide arterials and gates providing significant barriers to foot travel.

3. Land Use and Urban Form: The town core is of mixed-use, pre-automobile construction with 2-3 story buildings located on small lots. More suburban land uses dominate the outskirts of the core and the area to the immediate east of the station. The most important land parcel are vacant or underutilized, publicly- and privately-controlled land parcels immediately west of the station area. This redevelopment site has been identified for eventual mixed-use development; in the interim it will be use for surface park-and-ride lots and the new intermodal center.

4. Current Retail Environment: Bayamón is a hive of retail activity for the vast suburbanized residential areas surrounding the town center. A number of major projects, including the new Plaza Del Sol, Centro Commercial Santa Rosa, and the in-town El Canton Mall are located within a half-mile of the station, as is a significant amount of highway strip development along the major arterials. Retail businesses occupy all levels of the retail spectrum, from the vast super-regional shopping malls to intimate corner markets in the historic core serving small neighborhoods. In general, businesses are smaller and less corporate as one enters the historic core. The station will have a large amount of concession space, approximately 13,500 s.f.

5. Recognized Development Opportunities: The brownfield land parcels adjacent to the station is a major focus of both Tren Urbano and Municipal planning activity. While the mayor of Bayamón (which has planning autonomy) has drawn up a mixed-use development plan for the area, it has currently been shelved because of a
lack of funding. A newer proposal for a hotel development on the brownfield site, next to the intermodal center, has recently been advertised by the city. Other redevelopment projects include revitalization of the ‘Casa Jupiter’ block, and a Main Street Strategy for Calle Barbosa, the main interface between the station and the town core.

Bayamón Retail Development Potential

**Overall Retail Development Potential:** HIGH  
**Desirable Retail Types:**  
Convenience, Neighborhood, Community, Regional, Entertainment

Bayamón possesses one of the highest retail development potentials in the entire Phase I alignment. This is because of the combination of excellent transit and pedestrian access as well as excellent visibility of vacant, adjacent parcels to high-volume traffic arterials. In addition, there is a large, relatively vigorous commercial cluster within Bayamón’s town center, which could reap immediate commercial benefits from Tren Urbano even in the absence of new built space. The greatest challenge may be reconciling the different economic characteristics of the affluent, outlying shopping centers surrounding Bayamón (which consume a larger and larger share of the region’s total retail spending) and relatively down-market businesses of the historic core. Although the explosion of retail space in Bayamón appears to still possess significant vigor, there is still a danger of retail over-building in this vicinity that may suppress demand for new retail space. Careful design must be employed to prevent the high anticipated park-and-ride and transit transfer demand at this location from interfering with the parking and ease of access that will be required by any retail outlet on the redevelopment lands—traffic congestion and inconvenience could place it at a disadvantage relative to its out-of-town competitors. Improved access to the neighborhoods across P.R. 5 would theoretically enhance the
commercial viability of a neighborhood center near the station, though safety and crime perceptions may yield the opposite effect.

C.2.2. Deportivo

1. Location and Overview: Deportivo station, less than one-half a mile southeast of Bayamón town center is located adjacent to the major sports complex (stadium and coliseum) for the Municipality of Bayamón. The municipal courts, the Santa Rosa Mall, and the Santa Rosa neighborhood are also located in the vicinity.

2. Access: The station is a few hundred feet south of P.R. 2, and is surrounded by surface parking lots, facilitating easy automobile access. There will be little or no interaction with local bus and público routes at this station. The low-density environment, dominated by parking land and close to the P.R. 2 highway, results in few parcels having pleasant pedestrian access to this station; however, the station will be connected to the parking structure of the nearby Santa Rosa Mall by an aerial or mid-block, landscaped walkway. Access improvements are planned to better connect the Alturas de Flamboyan neighborhood (south of the sports complex), and the San Pablo and Santa Cruz neighborhoods (to the north) to the station.

3. Land Use and Urban Form: The character is dominated by large-scale uses and moderate-density suburban development; surrounding land uses include highway strip development (P.R. 2), institutional facilities (sports complex and courts, a major enclosed shopping mall, and a small low-density residential neighborhood. There is no undeveloped land in the vicinity, though there is a large amount of surface parking associated with the sports facilities, which could be stacked to create land, if justified economically. The City of Bayamón is presently investigating this possibility.
4. **Current Retail Environment:** Like Bayamón, this station lies within the influence zone of the commercial sprawl around the town core. The immediately adjacent Santa Rosa Mall is a major retail attraction in the immediate vicinity. Other small neighborhood businesses line the adjacent Calle Lolin Miranda.

5. **Recognized Development Opportunities:** There are no planned redevelopment projects for this station area, aside from a potential park-and-ride garage with a small concession space.

**Deportivo Retail Development Potential**

**Overall Retail Development Potential:** LOW

**Desirable Retail Types:**
- Concession, Expansion of Regional Center

The lack of land at this station and its isolation and lack of visibility from both P.R. 2 and the surrounding neighborhoods limits the retail opportunity at this location, without a major redevelopment of the Calle Miranda areas, which could support neighborhood services. Entertainment and dining uses to complement the sports uses may be feasible, though this must be spearheaded by the private interests which already control and in this area. The station may suffer from low passenger boardings during off-peak and non-event hours, limiting the viability of station concessions. Clearly, the proximity of the existing shopping center should be promoted to encourage non-work transit ridership.

**C.2.3. Jardines**

1. **Location and Overview:** Located in Bayamón, 1.5 miles from the town center, this station serves a predominantly residential district (Jardines de Caparra and El Polvorin neighborhoods). This station would serve any new development in the
undeveloped Rio Bayamón land parcel to the south by way of an additional eastern headhouse.

2. **Access:** There are no major roadways in the vicinity of Jardines Station; the largest roadway is a secondary thoroughfare, Calle Collectora Central. Only a small park and ride lot is planned. Transit service to the area is expected to be limited. Pedestrian access to the station is aided by the low traffic volumes, but it is hindered by the dis-connectivity of the cul-de-sac and loop street patterns characteristic of the area. Lighting and pedestrian conditions are poor—rear-lot walkways formerly leading from residential lots have been closed due to security concerns.

3. **Land Use and Urban Form:** Land use density is low, consisting primarily of modest single-family detached houses, as well as a few civic uses such as schools and a community center.

4. **Current Retail Environment:** No retail space currently exists in the station area, aside from a small shopping center 2 blocks to the south. These neighborhoods presently rely on commercial establishments in the P.R. 2 corridor for basic needs. No concession space has been programmed for this station.

5. **Recognized Development Opportunities:** A large greenfield parcel of land to the east of the station has been identified as a location for a future transit-oriented community, Rio Bayamón, containing up to 3,000 dwelling units. This could spawn the construction of another headhouse at the station. It is conceivable that a small retail concession could be incorporated into this project; however, it suffers from very poor accessibility and visibility.
Jardines Retail Development Potential

Overall Retail Development Potential: VERY LOW
Desirable Retail Types:
None

Poor visibility, low density, low station boardings, and residential character render this station an undesirable and unlikely location for retail development at any scale. High ridership may at most support a small convenience kiosk during peak hours. The development of the Rio Bayamón parcel may create opportunities for concessions or neighborhood convenience uses as part of a pedestrian-oriented neighborhood center.

C.2.4. Torrimar

1. Location and Overview: Torrimar station is the only station located within the Municipality of Guaynabo. Like Jardines, it serves a low-density, relatively affluent suburban neighborhood to the northwest. There are also low-and moderate-income neighborhoods in the vicinity.

2. Access: Secondary arterial streets provide the only road access to the station, and 50 park-and ride spaces are planned for the station. Connecting transit service will be nonexistent or limited. The Municipality has expressed interest in running a mini-bus shuttle bus from surrounding neighborhoods (many of them gated) to the station; this could potentially double as a shopper commuter shuttle. Pedestrian access to the surrounding neighborhoods is limited by fences, missing sidewalks in some areas, insufficient lighting, and poor street connectivity.

3. Land Use and Urban Form: Low density residential uses predominate. However, the small Centro Commercial Torrimar provided neighborhood-level
conveniences such as a small market and pharmacy. Additionally, Torrimar Park, a major community recreational facility, is located across Ave. Ramirez de Arellano from the station.

4. Current Retail Environment: The owner of the Centro Commercial Torrimar is concerned about competition from the one proposed in-station concession, and may indeed operate it. The connectivity between the station area and the shopping center needs to be improved. Due to grade separation, there are visibility problems in seeing the Centro from the train, though it is unlikely that train rider would make a special mid-trip stop to visit this small center. Other, affluent shopping centers are located further north in Guaynabo, and may be tied to the station by the proposed shuttle service.

5. Recognized Development Opportunities: Renovating the shopping center has been proposed, but residential opposition to densification and lack of buildable sites limit new development opportunities in this area.

Torrimar Retail Development Potential

**Overall Retail Development Potential:** LOW

**Desirable Retail Types:**

Concessions, Neighborhood Center Revitalization

It is unlikely that there will be an expansion in the retail activity than already takes place at the existing shopping center. Retail activity will likely be limited to convenience purchased from transit riders who begin or conclude their journeys at the Torrimar station. However, the potential to improve transit connectivity to retail nodes via the shuttle service should be explored.
A.2.5. Martinez Nadal

1. Location and Overview: Martinez Nadal is located just off of P.R. 20, a major north-south expressway, in San Juan Municipality. It is an ‘interceptor’ station, designed to capture park-and-ride commuters from surrounding suburban areas. Though located in San Juan, the station will also serve significant portions of Guaynabo, including San Patricio, the historic town center, and more recent suburban developments. The site presents challenging access and development circumstances, and has been the focus of a number of Tren Urbano Office improvement initiatives to prepare it for opening day.

2. Access: Regional road access is excellent due to the proximity of the P.R. 20 expressway. Local access is also good, due to P.R. 21 and P.R. 19. Transit connecting service is currently infrequent, but long-term potential is significant. Pedestrian connectivity is poor because of low-density land uses, lack of pedestrian amenities, and disconnected street networks. Some parts of the area are perceived as unsafe due to high-crime areas in the vicinity, because of which neighborhoods willingly restrict pedestrian access.

3. Land Use and Urban Form: Land development is predominantly suburban. However, several apartment towers are located near the station. Development is mixed in use but segregates into residential, commercial, and (dilapidated) industrial uses. Major trip attractors are the Hospital Metropolitano and a corporate office park.

4. Current Retail Environment: A small-scale commercial and professional strip exists along P.R. 21 to the south of the station, though visibility and pedestrian connectivity are substandard. A Pueblo supermarket and other community level chain retailers are located nearby, but are isolated from the station area by the expressway. The proximity of these facilities in this automobile-dependent area may
undermine the competitiveness of other community retailing in the station area. The station itself will include a number of concessions,

5. **Recognized Development Opportunities:** A mixed-use project is under development just south of the station, including 50-60,000 s.f. of restaurant and retail space and 200,000 s.f. of office space. A historic hacienda would be preserved as a small conference center. The 7-acre (PRHTA-owned) site adjacent will be used initially for park-and-ride, but could support a substantial future mixed-use development.

**Martinez Nadal Retail Development Potential**

**Overall Retail Development Potential:** HIGH

**Desirable Retail Types:**
- Concession
- Neighborhood
- Community
- Regional

The excellent expressway access at this station and developable land makes this location one of the few locations along the alignment where a truly new retail cluster might emerge, even up to the regional level. Major issues include ensuring that the development complements the existing community retailing across the expressway, and improving the safety image of the area through better policing or redevelopment of derelict lands. The station is unlikely to be the center of a new neighborhood center without major improvements in safety, connectivity, and refocusing of the surrounding urban land on the station area.
C.2.6. Las Lomas

1. **Location and Overview:** This station is another neighborhood station serving a primarily residential, low-density area. The major neighborhoods are Las Lomas and Santiago Iglesias. The station is located in the Municipality of San Juan.

2. **Access:** Secondary arterial roadways service the station, particularly Calle San Alfonso. No park-and-ride is planned for this station. Transit service is expected to be very limited. Pedestrian access suffers from a lack of street amenities and lighting, street connectivity, and the high incidence of criminal activity in the area.

3. **Land Use and Urban Form:** Aside from a few small businesses and the Hospital Metropolitano, the surrounding lands are low density residential. A low-income barrio (Corea) is located to the east of the station, and has a reputation for being unsafe to outsiders. More affluent neighborhoods are located to the north and west, but pedestrian mobility out of these areas is limited by street patterns and gates.

4. **Current Retail Environment:** The primary retail venues serving this area are located at a distance from the station area, in areas such as Ave. De Diego. There are a number of local businesses nearby providing some rudimentary services, especially food service. Concession space is planned for the station to support this neighborhood convenience function.

5. **Recognized Development Opportunities:** The station area lacks vacant or underutilized land parcels of significant size. There are a few vacant commercial buildings in the area, however redevelopment plans for these have not been determined. Revitalization of Barrio Corea has been suggested to improve social conditions and the quality of housing stock in the area.
Las Lomas Retail Development Potential

**Overall Retail Development Potential:**  LOW

**Desirable Retail Types:**
Concessions, Neighborhood

Concessions and perhaps adjacent neighborhood services can strengthen the station as a neighborhood commercial node. The lack of traffic and station visibility, as well as the lack of developable land, limit commercial prospects at a larger scale.

## C.2.7. San Francisco

1. **Location and Overview:** The station is located in a mixed-use suburban section of San Juan Municipality. It is a catchement station for park and ride commuters from P.R. Routes 18 and 52 extending south to Cauguas.

2. **Access:** Regional automobile access is excellent by way of P.R. Route 21 and Ave. De Diego, and several hundred park and ride spaces are planned here. Local bus connections are planned for the station. The surrounding pedestrian environment suffers from the low density of development, long distances, and few road or path connections to existing communities (due to a high incidence of gated communities).

3. **Land Use and Urban Form:** Large industrial and institutional uses dominate the immediate station-area vicinity: The VA Hospital, the Suiza Dairy, and an AMA bus garage. A low density residential neighborhood, San Fernando, is located a distance to the southwest. The San Francisco residential neighborhood is to the southeast. The length of De Diego Avenue is lined with strip commercial development, including a number of houses that have been converted to commercial uses. A Gulf
gas station occupies a prominent corner across De Diego from the train station. Also adjacent is a now-vacant structure in poor condition, the Fondo del Seguro building.

4. **Current Retail Environment:** De Diego Avenue contains dozens of small-sale businesses in a low-density urban arterial strip. The road experiences a high traffic volume that makes it well-suited for commercial development. Significant concession space has been programmed for this station, with an eye toward serving the adjacent worker presence with ‘food court’ concessions and convenience services.

5. **Recognized Development Opportunities:** The Fondo del Seguro building site and Gulf station have been identified as potential locations for redevelopment projects, in addition to public realm improvements along De Diego Avenue and between the station and the VA Hospital. The AMA bus terminal site is another candidate for future redevelopment.

**San Francisco Retail Development Potential**

**Overall Retail Development Potential:** MODERATE

**Desirable Retail Types:**

Concession, Neighborhood, Community

This site provides excellent visibility and traffic volume along De Diego Avenue, an important local arterial and commuter road. The area is recognized as an existing commercial center, and is well suited to new development, particularly retail space with a larger footprint than the majority of businesses along De Diego. The potential for retail activity in a development project on the park and ride land, the gas station site, or Fondo del Seguro site is thus recommended. While the site has good regional access to P.R. 18, it lacks visibility and is not likely to capture a major regional retail development.
C.2.8. Centro Medico

1. Location and Overview: Serving the Centro Medico complex in San Juan Municipality, this station is located near one of the largest employment centers outside of Hato Rey. It is likely to see large numbers of work trip commuters (including a substantial number of work commutes outside of ‘normal’ peak hours), as well as patients and visitors. The station is a few hundred yards north of P.R. 21, and a few hundred yards west of Expreso Las Americas (P.R. 18).

2. Access: The proximity to major expressways makes Centro Medico station easily accessed by automobile, though the area is subject to high congestion in peak hours. Local streets connect the station to the Reparto Metropolitano neighborhood. Being a destination station, there is virtually no park and ride at Centro Medico, though off-station parking exists throughout the complex. Transit and público service is good, and the potential for an intermodal center at this location is under consideration. Pedestrian circulation within the buildings of the complex is also good, though pedestrian amenities (esp. sidewalks and lighting) could use improvement. The expressways tend to limit pedestrian access beyond the medical center.

3. Land Use and Urban Form: Institutional uses, primarily massive hospital blocks set on spacious landscaped lots, dominate the station area. Covered or enclosed walkways connect some hospital buildings. Reparto Metropolitano is a moderate density residential neighborhood of low structures arranged in a grid network.

4. Current Retail Environment: There is essentially no retail activity aside from cafeterias associated with the hospitals. As an employment center, there are few neighborhood amenities, though basic services could be supported. Retail concessions have been programmed into the station, with an eye towards the
employee market of the medical center, including basic services and improved restaurant options.

5. Recognized Development Opportunities: The Tren Urbano Concession study recognized the potential for a mixed-use ‘food court’ and medical office building near the station to service hospital employees and visitors. This proposal is constrained by the need to reserve space for an intermodal transfer terminal. Centro Medico maintains a master plan, but no major alterations to the area are programmed.

Centro Medico Retail Development Potential

Overall Retail Development Potential: MODERATE
Desirable Retail Types:
Concessions, Neighborhood

Centro Medico lacks the complementary workplace land uses which typically thrive in mixed-use central business districts. Because of the large number of employees and significant trip attraction to this station, there is an unrealized potential for this type of commercial development. The use of this station as an intermodal hub would reinforce the concession potential.

C.2.9. Cupey

1. Location and Overview: Cupey station lies at the elbow in the Phase I alignment, just south of the town core of Rio Piedras. This is an important crossroads in the San Juan Metropolitan Area, where north-south P.R. 1 (Rio Piedras-Caguas) and East-West P.R. 176 (Bayamón-Carolina) converge. Universidad Metropolitana is a major destination serviced by this station.
2. **Access:** Roadway access to the station is very good, and major park-and-ride facilities are anticipated for this station. As in many locations in the San Juan core, traffic congestion can be a major accessibility barrier in this area. The regional arterials lead to a number of smaller collector streets as one moves away from the central crossroads where the station is located. Bus and público service is frequent, though the surrounding area is not amenable to pedestrian mobility once the passenger has alighted the transit vehicle. Wide, heavily-traveled arterial streets and sparse pedestrian amenities limit the amount of foot traffic in the station area.

3. **Land Use and Urban Form:** Land uses are very automobile—oriented in this area, dominated by commercial strip development. The Centro Commerical San Jose, dating from the 1950’s occupies a prominent site, providing community level services, fast food, and automotive services. Further from the station itself are low-density residential streets, a large agricultural experimental station to the North, and a municipal cemetery, also to the north.

4. **Current Retail Environment:** The site is one of the most important retail sites in San Juan, because of its excellent automotive, and soon multimodal access. However, the center is presently in dilapidated shape and is in need of a major renovation and perhaps a re-leasing to capture its full value potential. The site is located along a busy highway retail strip, which presents numerous accessibility challenges for pedestrians and transit riders.

5. **Recognized Development Opportunities:** Public space improvements are recognized as an important prerequisite to further development. PRHTA is planning to improve roadway circulation, while the station itself will include an underground pedestrian tunnel beneath P.R. 1, connecting it to Centro Commercial San Jose and one of the two large park and ride areas. An intermodal bus and público terminal is under construction at the west station headhouse (with future expansion to the east.
A comprehensive urban design study for the promising Cupey station is currently being prepared at the University of Puerto Rico.

Cupey Retail Development Potential

Overall Retail Development Potential: VERY HIGH
Desirable Retail Types:
Concessions, Community, Regional, Entertainment

This station area is perhaps the best non-traditional retail development location along the alignment. Opportunities for neighborhood development are limited due to the surrounding arterial streets, but convenience services for park and ride users can thrive. In addition, the trip attraction of Universidad Metropolitano and possibly Jardines Botanico will support ridership and retail opportunity here. Community or regional uses, relying mostly on automobile patrons but creating opportunities for transit riders as well, are probably the most appropriate used for this site. The close proximity of Plaza Las Americas precludes certain types of regional retail attractions due to competitive considerations, though this location may be attractive to complementary uses looking for a competitive alternative to a lease at that center. Careful attention should be paid to the design of the retail development, to maximize pedestrian accessibility without interfering with automobile traffic or park and ride operations.

C.2.10. Rio Piedras

1. Location and Overview: Rio Piedras is a traditional pre-automotive town center, which is similar in many ways to Bayamón. Now part of the Municipality of San Juan, the area is a mixed-use district that has been in a gradual economic decline for
Appendix C
Retail Analysis of Individual Station Areas

over three decades since the explosion of automobility on the island. The district is home to several thousand residents and is an important hub of the city's transit system. Vibrant by day, the area has a reputation for drugs, prostitution, and petty and organized crime in the off-hours.

2. Access: Rio Piedras is one of the most accessible points in the city by transit. Capetillo, a major AMA and Metrobus terminal is located in Rio Piedras a few blocks from the commercial heart, and a público terminal is located several blocks east, with additional service originating from around the main village green. Service is available to most parts of the metropolitan area without an additional transfer; this includes express Metrobus service to Hato Rey, Old San Juan, and Bayamón. Taxi service is also readily available. Driving and parking are more challenging here than in many locations. Roads are narrow and congested, with frequent intersections. On-street parking is rare, and an underground parking facility below the green suffers from maintenance and security problems (part of the garage has been closed off), though it is heavily utilized. The area is highly assessable on foot, although sidewalks tend to be narrow (on the order of three feet) except for the pedestrian mall Paseo De Diego and the wider sidewalks on Calle De Diego further along.

3. Land Use and Urban Form: Rio Piedras is Urban, with a dense grid of structure ranging from one to five stories in height. Streets are narrow with no setback from the lot lines. Most of the structures in the center are aging, as Rio Piedras has seen little new construction in recent years because of its overall decline. Land uses are mixed, often with multiple uses occupying different floors of the same building.

4. Current Retail Environment: The core of the commercial area is Calle De Diego, (including the Paseo De Diego pedestrian mall) branching perpendicularly off of Ave. Ponce De León, between the two Tren Urbano headhouses. Much of the former retail vigor of Rio Piedras has been siphoned off by the region's shopping centers;
however it remains one of the largest concentrations of transit-oriented shopping activity, catering mostly to the less-affluent bus and público ridership, as well as the significant elderly and immigrant presence in the neighborhood. Retailing is dominated by small merchants, a combination of proprietorships, Puerto Rican chain stores, and American chains. A few medium-size department and variety stores (20,000-30,000 s.f.) exist in Rio Piedras. Additionally, small vendors operating from carts or kiosks are common, and the newly-rebuilt Mercado del Rio Piedras market specializes in small-scale food merchants and cafes.

5. **Recognized Development Opportunities:** The redevelopment potential of Tren Urbano is recognized both within the Tren Urbano office and within the community. Community leaders are beginning to take a proactive role in the long-range planning and construction progress of Phase I, in a project where public involvement has been relatively scant as compared to mainland U.S. projects. Because most of the building stock is in private hands under multiple ownership, there is little opportunity for major station-area development projects. However, some investors have been acquiring properties in the vicinity of the station, and land values are reportedly rising. There continues to be a tradition of public investment in Rio Piedras, as evidenced by the new market building. Some public realm improvements will be implemented as a part of the Tren Urbano construction contract.

**Rio Piedras Retail Development Potential**

**Overall Retail Development Potential:** VERY HIGH

**Desirable Retail Types:**

Concession, Neighborhood, Community, Regional, Entertainment
Rio Piedras is one of the communities whose retail sector stands to benefit most from Tren Urbano Phase I. The land use and urban character of the district are aptly suited to transit retailing, and a rather vigorous retail environment already exists, with plenty of space for expansion of small retail venues. The high anticipated ridership at this station hints of a brisk concession trade. While the area has traditionally focused on goods distribution and basic services, new creative twists such as entertainment venues and restaurants could renew the energy of the commercial district and extend activity into the evening hours. Selective consolidation or demolition of building would be necessary to allow retail formats that require a large footprint to make a presence in the area.

The first order of business in revitalizing the commercial area may be to restore the area’s tarnished image as a down-market shopping area with a reputation for off-hours criminal activity. Another significant challenge will be reconciling the potential regional draw of the Rio Piedras commercial district with the relatively old and small building stock with fractured ownership. In addition, a larger regional role for Rio Piedras may conflict with its present, lower-income orientation. If the train attracts a more affluent demographic than the existing transit services, the area may see an overall transformation of its commercial character.

Community and Business Associations should play a prominent role in shaping the renewal and future development of the Rio Piedras core. Formation of a Business Improvement District to provide common services such as security, street cleaning, and advertising, can help the community compete with single-management shopping districts. The roots of such an organization may already exist in Rio Piedras’ business and civic associations. Creativity and deliberate, aggressive actions will be required for Rio Piedras to realize a renewed commercial importance on a regional level in the increasingly competitive marketplace. There may be difficult political tradeoffs between local and corporate ownership, existing patterns and future possibilities that will require local input and direction.
C.2.11. Universidad

1. **Location and Overview:** Universidad station is a short distance north of Rio Piedras station, within a short walking distance. It primarily serves the Rio Piedras campus of the University of Puerto Rico, whose main gates are located adjacent to the south headhouse. The student population has been identified as a potentially large source of Tren Urbano ridership, especially if promotions directed at students (e.g., U-Pass or special promotions) are implemented.

2. **Access:** The station is well-served by transit, located on the main AMA and Metrobus trunk line to Hato Rey. Público service to the area is also frequent. Major arterial streets service UPR from surrounding expressways, although congestion is frequent and parking availability is constrained (though generally free of charge) due to the high number of automobile commuters to the University. Pedestrian access to Rio Piedras is convenient and or relatively high quality; pedestrian paths are plentiful and pleasant throughout the verdant university grounds, though a number of university buildings are a rather long distance from the station and potential retail development sites.

3. **Land Use and Urban Form:** The area is of a low density but urban character, with much of the surrounding land occupied by the university campus. On the opposite side of Ponce De León are a series of low towers, an area identified for redevelopment. Most land in the area is controlled by the University, though PRTA currently occupies some construction staging land as well.

4. **Current Retail Environment:** There is little retail development in the immediate vicinity of the station, although there is a large potential ridership market from University commuters. For services most University students and employees head to
nearby Rio Piedras, where shops, cafeterias, and fast food establishments are plentiful. Currently and in the future, transit riders arriving and departing from the front gates of the University are underserved by retail concessions, except for occasional used book sellers who sell from the sidewalk. On-campus fast-food concessions in the student center at the center of campus could provide serious competition for take-out dining, though there is are opportunities for expanded choice or casual, sit-down dining. Other synergies with student populations, such as music stores, are generally under-represented.

5. Recognized Development Opportunities: Plaza Universitara is a proposed mixed-use commercial and student housing development across Ponce de León Avenue from the University, immediately adjacent to the station. This project is anticipated to be under construction in the Spring of 2000. While the scale and programming of this development is presently unclear, this University project could serve as new focal point for the area as a center of student activity and residence.

Universidad Retail Development Potential

Overall Retail Development Potential: MODERATE
Desirable Retail Types:
Neighborhood, Specialty (Student-Oriented)

The Universidad station is the primary destination for what could be one of Tren Urbano’s most important ridership groups: college students. The proposed Plaza Universitara could provide retail opportunities directed at this market, particularly concession services and specialty college market goods such as bookstores, electronics, and eating or entertainment venues. This would provide the only off-campus commercial activity in the commuter path between university buildings and the train station. High automobile and surface transit traffic on Ponce de León could also support this
development. Similar projects near other American universities can serve as a model for the area. One consideration to be taken into account is the affect of such a project on the vitality of Rio Piedras, which has already suffered from a decline in student residence and commerce in recent decades.

### Appendix C

#### Retail Analysis of Individual Station Areas

C.2.12. Piñero

1. **Location and Overview:** Adjacent to the depressed Ave. Jesus Piñero highway, the Piñero station is the southernmost station in the ‘Golden Mile’ financial district of Hato Rey. It is within the Municipality of San Juan.

2. **Access:** Despite central-city congestion, highway access and visibility from Jesus Piñero is excellent, as access ramps are located immediately adjacent to the station. No park-and-ride lots are planned, though commercial lots for local businesses will exist at least in the interim period before more intense uses can be constructed. Pedestrian access in the area is relatively high, with good street connectivity, although streetscape improvements are required to improve the walking experience. Transit service is also excellent, as the AMA-Metrobus trunk line is nearby on Rivera and Ponce de León Aves. The station will also include a bus loading area for longer-distance bus services.

3. **Land Use and Urban Form:** Much of the Piñero area is underutilized given its centrality and the value of land in the area. A large number of employers are located in the area, including the IBM and Doral buildings, the Puerto Rico Telephone Company, and the Centro Judicial. Most structures are of one or two stories, though a few towers of approximately 10 stories are located in the vicinity. To the east the area quickly transforms into a low-density urban residential neighborhood. Land uses are mixed, though a few of the larger civic and commercial uses occupy large sites. Overall character is ‘edge city,’ with moderate density but plentiful parking. The El
Monte residential community to the west is a vibrant Modernist community which is not presently gated.

4. **Current Retail Environment:** No concession space is planned for this station, though the high employment concentration in the area raises the possibility of in-station or off-station food and convenience uses. A small cluster of neighborhood businesses exist to the east of the station, and occasional businesses geared toward the business community exist along the major avenues. Some retail properties in the area have been converted to office uses.

5. **Recognized Development Opportunities:** The Telefonica building site is a recognized redevelopment opportunity, in which Tren Urbano wishes to introduce a retail component. This low-density site offers a large, contiguous parcel of land that is both adjacent to the station as well as the Jesus Piñero off-ramp. The entire area could be the focus of a redevelopment and intensification initiative. Land-banked surface parking lots should be converted to stacked parking in this core urban area, when economic conditions permit.

**Piñero Retail Development Potential**

- **Overall Retail Development Potential:** HIGH
- **Desirable Retail Types:**
  - Concession, Specialty (Business-Oriented), Community, Regional, Entertainment

The Telefonica site has excellent highway visibility and access, as well as convenient access to the transit station. It could serve as the location of a major retail development, geared at either the local working market and perhaps the University. It could also be the focus of a regional-scale development, such as a small mall of specialty shops, a Cineplex, or an entertainment cluster. The retail uses of this site should be values in any
redevelopment plan for this area. The station itself is in an obscure, low-visibility location off of the main avenues; this could hurt the viability of in-station concessions. Street corner concessions near, but not in, the station are preferable.

C.2.13. Domenech

1. Location and Overview: Adjacent to Ave. Munoz Rivera, towards Ponce de León, this station is south of the commercial heart of Hato Rey. Intense office uses make this one of the primary employment destinations along the alignment. Some parcels are underutilized, but in general the economy is vibrant with active pedestrian traffic during working hours. The presence of three technical schools nearby creates a substantial student presence in the area.

2. Access: Roadway access to the site is good via urban avenues, but parking in the area is constrained during working hours, because of the number and density of workplace commuters. Surface parking lots are plentiful in the area, and no interim park and ride space is planned. Transit access is excellent, with service from the AMA-Metrobus trunk route between Rio Piedras and Old San Juan. Pedestrian quality and access is high, though streetscape amenities could use improvement. Adjacent residential communities are, to date, un-gated, improving pedestrian and transit accessibility.

3. Land Use and Urban Form: The intensity of office towers increases at this station, which is closer to the core of Hato Rey. Office uses dominate, though interspersed are a few retail uses which complement the office sector. A number of parcels are underutilized and could see intensification.

4. Current Retail Environment: This area is not a major retail center, though the presence of sidewalk traffic and business persons on the weekday have spawned
complimentary uses such as fast food, copy centers, and bank branches. An Audi car dealership existed formerly near the station (demolished for station construction), and this site is expected to be redeveloped as the area transforms. One concession is planned for the station.

5. **Recognized Development Opportunities:** The entire area is expected to be reinforced by the presence of the Train, and is hoped to absorb a large amount of new office growth, as well as expansion of existing educational institutions.

**Domenech Retail Development Potential**

**Overall Retail Development Potential:** MODERATE  
**Desirable Retail Types:**  
Concession, Specialty (Business-Oriented), Neighborhood

This station possessed very good visibility to the highly-traveled Ave. Munoz Rivera, making it an excellent candidate for a concession space that services a broader pedestrian market. Specialty retailers selling high value-to-weight merchandise to professionals or working individuals is another promising opportunity. Adjacent temporary parking lot land is well suited for a new office tower or mixed-use, and could include a retail component geared toward office uses, or perhaps an entertainment-oriented use for after-hours patrons. The area does not possess the residential density to support larger community uses such as a supermarket, nor is the congested area necessarily the best location for such a facility. Supporting auto access will be difficult in this location as it builds out.
C.2.14. Roosevelt

1. **Location and Overview:** This station is located in the heart of Hato Rey, at the intersection of Ave. F.D. Roosevelt and Ave. Rivera. It is a major employment node on the Golden Mile. A major bus ‘transit center’ currently exists on a site across Ave. Munoz Rivera from the station; in the future this will remain as a new intermodal transit terminal.

2. **Access:** Road access to the site is good, although congestion and parking limitations add considerable difficulty to accessing this area. Parking is available in garage and surface lots, though it is generally paid or by permit only. No park and ride lots are planned for this location. Transit access is presently very high, with routes from across the city converging at the Hato Rey transfer point. Públicos are also in plentiful supply. The pedestrian environment is challenged by the width, traffic volume, and aggressive driving at the Roosevelt-Rivera intersection. In general, however, this is one of the more pedestrian-friendly parts of San Juan, with plentiful sidewalk activity on weekdays and a relatively pleasant streetscape. The walking environment on Roosevelt deteriorates rapidly with distance from the intersection.

3. **Land Use and Urban Form:** Land use includes a typical mix of Hato Rey office towers interspersed with underutilized parcels or parking lots. Retail uses are interspersed on the ground levels of buildings. Land use intensities quickly diminish to single-level buildings away from Ave. Rivera. Polytechnic University, to the south of the station on Ponce de León, is a major employment center and trip attractor, bringing a student presence to the area.

4. **Current Retail Environment:** The area is not a major retail node in its own right, though Ave. Roosevelt is a long and intense commercial strip with a wide variety of
businesses and very poor pedestrian connectivity. About a half-mile west of the station is the Plaza Las Americas Mall, accessible by transit from the Hato Rey transit center. A single medium-sized concession area is planned for the station.

5. Recognized Development Opportunities: A former shopping center, Centro Commercial Metropolitan, has been demolished in preparation for Tren Urbano, and is currently in use for construction staging. It is a major site for new mixed-use transit-supportive development. There is also a mixed use project anticipated for construction near Polytechnic University.

Roosevelt Retail Development Potential

Overall Retail Development Potential: Moderate
Desirable Retail Types:
Concession, Neighborhood, Specialty (Business-Oriented), Entertainment

Similar to other Hato Rey stations, there is a potential for expanded retail development that is complementary to office commuters and business and educational activities. As with Domenech and Piñero, there is a potential to introduce dining or entertainment uses at the high-visibility concession space or in a mixed-use development on the Centro Commercial Metropolitan site. The high transit transfer presence of this station boosts the prospects for basic concession services, and there may be retail opportunity aimed at pedestrians transferring between the rail and bus stations. The proximity of Plaza Las Americas and the more auto-accessible Roosevelt strip will probably preclude extensive retail development at this intersection, besides what is geared at the office and transit markets.
1. **Location and Overview:** Hato Rey station is located at the center of the Hato Rey corridor, the center of finance and business in San Juan. The area is presently consumed in large part by staging areas for Tren Urbano construction and underutilized land. Thus, the area is a key location for new mixed-use development in the vicinity of the train line. The station is parallel to Ave. Rivera, set back half a block from the street.

2. **Access:** The Aquaexpreso water shuttle terminal is also nearby, though all service to Old San Juan and Catano is presently suspended. Automobile access is constrained by the difficulty of parking, though roadway access into the site is good. Congestion is frequent in this area during the daytime. The station is near the AMA-Metrobus trunk line and público routes and is thus highly accessible by transit. However, the walking landscape is currently barren and there are few destinations that are currently within a pleasant walking distance of the station, due to the enormity of vacant land parcels. No park and ride is planned.

3. **Land Use and Urban Form:** The immediate station area is dominated by brownfields. In addition, there are a number of existing commercial towers in the area between Aves. Rivera and Ponce de León. This constitutes a large potential work trip ridership to this station. As with the stations to the south, there is intermittent commercial development along the major avenues, geared toward business and work purposes, as well as serving the needs of surrounding communities. Residential townhouses are nearby, but are gated off from the street. A major day care center is in the planning at the Acuaexpreso water shuttle site.
4. **Current Retail Environment:** Small retail venues are located along the major avenues, catering to workplace services and surrounding neighborhoods. The lack of development in the area renders this site a 'non-location' on the city's retail map.

5. **Recognized Development Opportunities:** Vacant land near the station is the location for a new Coliseum (now under construction), as well as other mixed-use office and (potential) retail development. Planning for this area is currently ambiguous, but will have a large impact on its future character and retail potential. One small concession space currently planned at this station at the north headhouse.

**Hato Rey Retail Development Potential**

**Overall Retail Development Potential:** LOW  
**Desirable Retail Types:** Concession, Neighborhood, Specialty (Business-Oriented), Entertainment

The future character of this station area is very uncertain; the character of the development will greatly impact its retail potential. The proximity of Plaza Las Americas and the vacant retail space of Santurce raise doubts about the inherent retail demand of this area. However, a new destination entertainment or dining center, especially in combination with the proposed Coliseum, could help to define the district while harmonizing with the daytime office worker restaurant demand. If the area develops into an extension of the Hato Rey office district, retail uses similar to Roosevelt and Domenech may be a better fit. The large land vacancy lends itself to large-scale projects, though auto congestion, competition from Plaza Las Americas, and costs of parking provision in the core of the business district may dampen investor enthusiasm for large new retail development at this location.
C.2.16. Sagrado Corazón

1. **Location and Overview:** Sagrado Corazón is the northernmost terminus station of Phase I, on the inbound end of the line. It lies north of the Golden Mile section of Hato Rey. The surrounding area is primarily residential, but Sagrado Corazón University is located a short distance away.

2. **Access:** Automobile access and visibility from a highway-like section of Ave. Munoz Rivera is very good, as is access from Ave. Fernandez Juncos and Ave. Ponce De León. This access is to the detriment of transit and pedestrian circulation, however, as the station area is somewhat isolated by wide roadways and the expressway. The AMA and Metrobus trunk lines are accessible from this location. Some parcels are accessible from pedestrian connections of reasonable quality, though the wide arterial streets provide formidable barriers between the station and the bulk of the district.

3. **Land Use and Urban Form:** The predominant character is a dense grid of low- to mid-rise structures, predominantly residential urban neighborhoods. The expansive Barrio Obrero neighborhood has a reputation among outsiders as being unsafe, and criminal activity in the area is substantial. The Sagrado Corazón University campus is to the east of the station. A large vacant brownfield parcel exists just west of the station, and is currently being used for construction staging.

4. **Current Retail Environment:** Few retail venues currently exist in the area. Plaza Las Americas is nearby via Expreso Las Americas, and a few small neighborhood businesses are located along the major avenues.

5. **Recognized Development Opportunities:** The large brownfield area is anticipated to be the site of a mixed-use development. Construction of government
offices, such as the new PRHTA headquarters to the immediate northeast of the station, is viewed a development catalysts for this area. The PRHTA building will contain two floors of retail and restaurants. There is also a recognized need to improve the safety and image of the Barrio Obrero community.

**Sagrado Corazón Retail Development Potential**

**Overall Retail Development Potential: MODERATE**

**Desirable Retail Types:**

Concession, Neighborhood, Community, Regional

This station presents an interesting opportunity to exploit the proximity and access of the expressway to provide higher-order retail opportunities to train riders. The safety perception of the area will be a major obstacle to this, as will traffic engineering measures to ensure auto access without further degrading the pedestrian realm. Competition from Plaza Las Americas is also a factor; it will be necessary to find uses that are complementary to existing retail competition from Plaza Las Americas.

If a larger retail venue cannot be attracted to this location, there is still a potentially large student ridership and the opportunities to create complimentary uses for this demographic. Furthermore, the station and concessions could be used to create a neighborhood commercial center for the surrounding community. Frontage space on the brownfield land facing Ave. Fernandez Juncos, and the parcel directly across the street adjacent to the station, are probably the best locations for this development.
References


*Clackamas Regional Center Area Plan.* Prepared by Otak, Inc. for the Clackamas County, OR, Dept. of Transportation, Nov. 1997.


Handy, Susan L. “Regional Versus Local Accessibility.” Built Environment, Vol. 18, No. 4, November 1996.


References


Puerto Rico Planning Board. Regional Plan for the San Juan Metropolitan Area. San Juan, Puerto Rico, 1956.


Oregon Department of Transportation. “Shared Parking.” Salem, OR, 1996.


