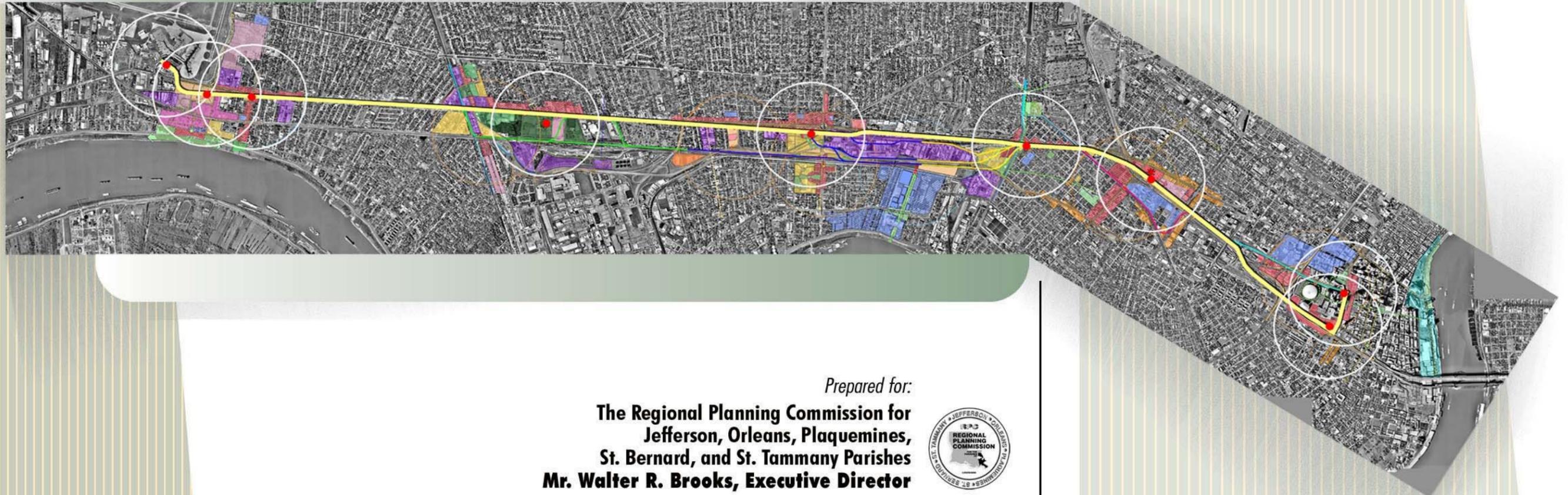


Policy Plan for Transit-Oriented Development

New Orleans Light Rail Transit Project



Prepared for:

**The Regional Planning Commission for
Jefferson, Orleans, Plaquemines,
St. Bernard, and St. Tammany Parishes
Mr. Walter R. Brooks, Executive Director**



Prepared by:

Bechtel Infrastructure Corporation



in association with

Urban Planning & Innovations, Co.



June 2005

Section	Page	Section	Page
Acknowledgements			
1 Introduction.....	1-1	3 Current and Proposed Planning Practices	3-1
1.1 Framework, Purpose and Approach	1-1	3.1 Transportation and Land Use Planning in the NOLRT Corridor	3-1
1.2 Organization of This Report	1-1	3.1.1 New Orleans Regional Planning Commission.....	3-1
1.3 Introduction to Transit Oriented Development (TOD).....	1-2	3.1.2 City of New Orleans	3-1
1.3.1 Definitions of Transit-Oriented Development	1-2	3.1.3 Jefferson Parish.....	3-1
1.3.2 TOD Measures, Techniques, And Instruments	1-2	3.1.4 City of Kenner	3-2
1.3.2.1 Transit Station Focus	1-2	3.1.5 New Orleans Regional Transit Authority	3-2
1.3.2.2 Density	1-2	3.1.6 Jefferson Parish Department of Transit Administration.....	3-2
1.3.2.3 Bulk, Setback, and Area Controls.....	1-2	3.1.7 Other Governmental and Non-Governmental Stakeholders	3-2
1.3.2.4 Urban Form and Mixed Uses	1-3	3.2 Resources for Updating Plans.....	3-7
1.3.2.5 Street Patterns and Parking Restrictions	1-3	3.3 A Framework for Updating Plans	3-7
1.3.2.6 TOD Transportation Infrastructure	1-3	4 Concepts, Guidelines and Policies Supporting TOD	4-1
1.3.3 Broader Planning Programs and Policies	1-3	4.1 Transit Station Concepts	4-1
1.3.3.1 Area-wide Planning and Smart Growth Management	1-3	4.1.1 Site Size.....	4-1
1.3.3.2 Joint Development	1-3	4.1.2 Development Considerations.....	4-1
1.3.3.3 Transfer of Development Rights.....	1-3	4.1.3 Parking Considerations	4-1
1.3.3.4 Fiscal Incentives for Infill.....	1-3	4.1.4 Safety.....	4-2
1.3.3.5 Disincentives for Automobile Use.....	1-3	4.1.5 Access Mode Priorities and Accommodations.....	4-2
1.4 Benefits of TOD	1-3	4.1.6 Accommodations for Non-Drivers.....	4-2
1.5 How TOD Can Be Achieved	1-4	4.1.7 Directional and Informational Signage.....	4-2
2 Background	2-1	4.1.8 Landscaping	4-2
2.1 Regional Context for NOLRT and TOD Planning.....	2-1	4.1.9 Site Lighting Design	4-2
2.1.1 NOLRT Corridor Profile	2-1	4.2 Station Design Guidelines	4-2
2.1.2 Generalized NOLRT Corridor Land Use.....	2-2	4.2.1 Aesthetic Objectives	4-2
2.1.3 Major Activity and Employment Centers	2-2	4.2.2 Basic Station Design Consideration	4-3
2.1.4 Proposed Area Redevelopment Plans	2-4	4.2.3 Station Concourse Design Considerations	4-3
2.1.5 Identification of Potential Station Sites	2-4	4.2.4 Station Platform Design Considerations	4-3
2.2 Expanding Transit Services in the New Orleans Region	2-8	4.2.5 Horizontal and Vertical Circulation Guidelines.....	4-3
		4.2.6 Station Space Planning	4-4

Section	Page	Table	Page
4.2.7 Station Control and Emergency Evacuation	4-4	2.1 Approximate Distribution of Land Use (percent) by Category and by Parish within the NOLRT Project Corridor	2-2
4.2.8 Station Signage, Lighting, and Color	4-4	2.2 Potential NOLRT Station Locations	2-5
4.2.9 Potential Additional Facilities Within Stations	4-4	3.1 Summary of Current Local Planning Efforts	3-3
4.3 TOD Guidelines	4-5	3.2 Application of Transit-Oriented Development Policies in the New Orleans Region	3-10
5.1.1 Transit Service	4-5	4.1 Mix of Land Uses for TOD, By Type and Percent of Total Area	4-5
5.1.1 Mixture of Land Uses	4-5	4.2 Design Criteria for Successful Urban TOD	4-5
5.1.1 TOD Design Topics	4-5	4.3 Design Criteria for Successful Neighborhood TOD	4-6
4.4 Zoning Policies	4-6		
4.4.1 Lessons Learned	4-6	Figures	Page
4.4.2 Example Neighborhood TOD Ordinance	4-7	3.1 Policy Framework for New Orleans Region	3-9
4.5 Urban Ecology, Habitat and Revitalization	4-9		
5 Implementation	5-1	Appendices	
5.1 Incorporate TOD Polices Into Comprehensive Plans And Zoning Ordinances	5-1	Appendix A – Transit Cooperative Research Program, TCRP Report 102, Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects, Transportation Research Board, National Research Council, January 2004.	
5.1.1 Local Plan Review and Consistency Determination	5.1	Appendix B – Legal Research Digest, TCRP Report Number 12 The Zoning and Real Estate Implications of Transit-Oriented-Development, Transportation Research Board, National Research Council, January 1999.	
5.1.2 Establish Plan And Zoning Modifications	5.1	Appendix C - Examples of How Transit-Oriented Development Can Be Achieved - Selected Case Studies and References	
5.2 Corridor Real Estate Development Plan	5-1	Appendix D – Photographs of Light Rail Transit Applications	
5.2.1 Economic Analysis of Transit-Oriented Development	5.1	Appendix E – New Orleans Light Rail Transit Program: An Economic Overview - Prepared by The Urban Innovations Group, New Orleans LA. July 2004	
5.2.2 Market Assessment	5.1	Appendix F – Transit-Oriented Development Policy Workshop, February 2004	
5.2.3 Concept Plan Update	5.2		
5.2.4 Revenue Analysis	5.2		
5.2.5 Marketing Strategy	5.2		
5.2.6 Input to Project Execution Plan	5.2		
5.3 Prepare Station District Plans	5-2		
5.4 Immediate Next Steps	5-2		

ACKNOWLEDGMENTS

This Policy Plan for Transit-Oriented Development – New Orleans Light Rail Transit Project, presents findings from the third phase of a study in support of a proposed new light rail transit project, also under study as an alternative in the East-West Corridor Draft Environmental Impact Statement (DEIS) and Alternatives Analysis study. The proposed project would connect the city of New Orleans, Jefferson Parish and the city of Kenner. Furthermore, the work was prepared, in part, under Contract Transit-Oriented Development Policy Plan, Phase 3, and Federal Aid Project No. LA-90-X249-00, RPC Project No. X249-LRT, between the study team and the New Orleans Regional Planning Commission.

The report was prepared by an integrated consultant team of Bechtel Infrastructure Corporation, a member of the Bechtel group of companies (Bechtel), an international engineering and construction company headquartered in San Francisco, California; Urban Planning and Innovations, a civil/environmental engineering, urban planning and information technology company, located in Jefferson Parish, Louisiana; and support from The Innovations Group, an economic consultant, located in New Orleans, Louisiana.

Contributors in the preparation of this report include: Mr. Thomas Bordeaux, Project Manager/Chief Urban Infrastructure Planner, Bechtel; Mr. Christopher Hartzell, Project Development Manager, Bechtel; Mr. Thomas Beggs, Sr. Planner/Urban Designer, Bechtel; Mr. Scott Fisher, Principle, The Innovations Group; and Ms. Monica Kelley, Project Planner, Urban Planning & Innovations.

The consultant team would like to express their appreciation to the following agency personnel who provided direction and facilitated inputs to this report. Appreciation for their contribution goes to Mr. Walter Brooks, Mr. James Harvey, Ms. Karen Parsons, and Ms. Lynn Dupont, New Orleans Regional Planning Commission; Ms. Beth James and Ms. Cynthia B. Fromherz, City of New Orleans, Mayors Office of Economic Development; Ms. Collette Creppell, City of New Orleans Planning Commission; Mr. Scott D. Adams, Jefferson Parish Economic Development Commission; Mr. Edwin J. Durabb and Ms. Terri Wikinson, Jefferson Parish Planning Department; Mr. Randy Clement and Mr. Jay Herbert, City of Kenner Planning Department; Mr. Roy Williams, New Orleans Louis Armstrong International Airport.

The consultant team would also like to express their appreciation to the URS Corporation team preparing the AA/DEIS, for their input and cooperation.



Section 1 - Introduction

This Policy Plan for Transit-Oriented Development, prepared for the New Orleans Light Rail Transit (NOLRT) project, presents a recommended policy plan resulting from a three-phase study. The report documents the work prepared, in part, under a Phase 3 contract between the study team and the New Orleans Regional Planning Commission (RPC).

This report was prepared by an integrated consultant team of Bechtel Infrastructure Corporation, a member of the Bechtel group of companies (Bechtel), an international engineering and construction company headquartered in San Francisco, California; and Urban Planning and Innovations (UPI), a civil/environmental engineering, urban planning and information technology, company, located in Jefferson Parish, Louisiana.

This section presents the framework and purpose, definition, benefits, approach, and government role, in support of Transit-Oriented-Development.

1.1 FRAMEWORK, PURPOSE AND APPROACH

This policy plan is a starting point for the further development of land use policies supportive to transit development in the New Orleans region. The purpose of the policy plan is:

1. Support the development of a Light Rail Transit (LRT) project in the East West Corridor between the Louis Armstrong International Airport and Downtown.
2. Present a policy framework applicable throughout the New Orleans region to support transit development and the linkages between land use and transportation infrastructure development.

This work was prepared in sequence and parallel to the East-West Corridor Draft Environmental Impact Statement (DEIS) and Alternatives Analysis (Alternatives Analysis). The DEIS/AA is a federal and state funded transit project development step, supported by the RPC, due for completion during 2005. In support of the AA/DEIS during the previous three years, transit-oriented development concept plans were prepared, evaluated and refined in cooperation among study participants.

The earlier Phase-2 contract produced a major evaluation of TOD concept plans for fifteen potential transit station areas identified in the airport to downtown corridor and under consideration in the current

East-West Corridor AA/DEIS. These TOD land use concepts were developed with input from local planning officials in the City of New Orleans, Jefferson Parish, the City of Kenner and the Jefferson Parish Economic Development Commission (JEDCO).

During this Phase-3 contract, the study team further reviewed the TOD land use concepts and focused on policies in coordination with local planning officials and other public and private organizations.

The key elements of this transit policy framework, are:

- Preliminary Economic Overview of three selected TOD Concept plans (Appendix E to this report)
- Determination of local planning consistency with TOD concepts
- Policy workshops with local planning officials
- Policy Plan for Transit-Oriented Development (this report)

The approach taken included:

- A review of current planning and zoning updates underway or recently completed in the City of New Orleans, Jefferson Parish and the City of Kenner. The team examined how closely these plans are aligned with the TOD concepts developed, and recommended modifications for actions by local authorities.
- Inventory “Best Practices” in TOD policies and measures from secondary source documents and from up to four other regions outside the greater New Orleans area, as input to policies that local jurisdictions may consider implementing in the future.
- Identify recommended revisions and priorities within local policies, plans and implementation measures, which local jurisdictions should consider in supporting implementation of TOD in the proposed LRT project corridor.

In overview, this policy plan accomplishes a starting point for further work in support of TOD and the development of the LRT project.

Efforts thus far, lay the foundations for further actions. This policy plan is intended to be a dynamic document that can be amended and expanded as the LRT project development advances. The policy plan is considered a tool to educate and stimulate the development of a complete corridor development plan.

1.2 ORGANIZATION OF THIS REPORT

This report has been organized to provide the following information:

Section 1. Introduction, overview of Transit-Oriented Development including, definitions, measures, techniques, and policies

Section 2. Background, summary of the East-West corridor

Section 3. Current and Proposed Planning In the Corridor, current and proposed planning practices in the proposed LRT Corridor

Section 4. Guidelines, Policies and Development Tools, overview of TOD tools for the New Orleans region

Section 5. Implementation, a recommended plan to support the LRT Project, and TOD for the New Orleans region

Appendix A – summary from the most comprehensive review of TOD practices in the United States

Appendix B – summary of legal research of TOD applications

Appendix C – summary of case studies and references for further information about TOD applications from rail transit projects

Appendix D – photographs of recent LRT applications

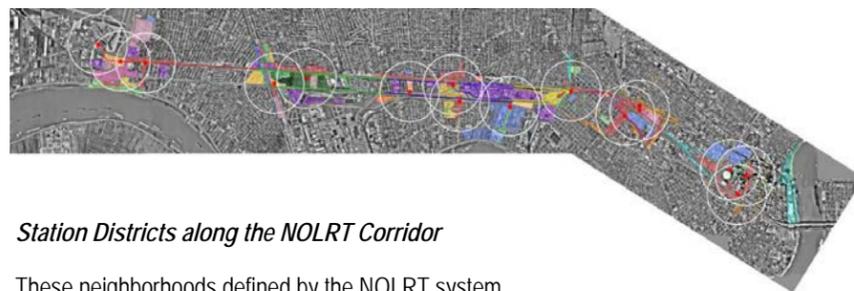
Appendix E – Economic Overview of the New Orleans LRT Project, based on preliminary development scenarios

Appendix F – selected station district concept plans and development scenarios, the basis of the Economic Overview

1.3 DEFINITION OF TRANSIT-ORIENTED DEVELOPMENT

The primary objective of the New Orleans Light Rail Transit (NOLRT) project (the project) is to link Louis Armstrong International Airport (LAIA) to central New Orleans. A related and important function of the NOLRT is the role it will play in shaping the region’s development, and in enhancing the quality of life for residents, visitors, communities, and businesses of the New Orleans metropolitan area.

While NOLRT will have an impact on the greater New Orleans area as it shifts metropolitan travel from the automobile to the new light rail transit system, it should also have a more local effect along the corridor of the transit system, and particularly around the transit stations. The areas around these stations may be viewed as transit districts, and because they are being designed with the NOLRT in mind, they may help redefine how any new growth and redevelopment will occur in the region.



Station Districts along the NOLRT Corridor

These neighborhoods defined by the NOLRT system represent a new type of urban development in the New Orleans Metropolitan Area

The key to station district planning for the NOLRT is the application of the concept known alternatively as transit supportive land use, or transit-oriented development (TOD). The purpose of this section is to identify specific measures and techniques that can be undertaken to facilitate TOD. The previous chapters of this report addressed the location of transit stops along the NOLRT corridor and presented planning and design concepts for the individual stations. This section looks at a different level of planning – the districts around those stations – and inventories various TOD measures used in other cities that could be applicable to the NOLRT. Section 5 of this report then takes the data and ideas from all these sections and presents TOD-focused land use plans for the proposed stations and districts.

1.3.1 DEFINITIONS OF TRANSIT-ORIENTED DEVELOPMENT

TOD is urban development that is not only defined by public transit, but which by its design encourages public transport as an alternative to the private automobile. Typically it consists of a mixture of uses and is of higher density than average development, especially outside central business districts (CBDs).

The Federal Transit Administration (FTA) defines TOD as development within one half mile of a transit station.¹ Calthorpe Associates, a leading proponent of TOD, describes it as “a mixed use community within an average of 2000 feet walking distance (approximately 10 minutes) of a transit stop and core commercial area.” More general definitions² suggest that TOD is a wide-ranging mix of residential, retail, office, open space, and public uses in a pedestrian-oriented environment, making it convenient for residents and commuters to travel by transit, bicycle, or foot, either as an alternative to the automobile or in addition to it.

TOD is correctly associated with smart growth initiatives, though TOD deals specifically with development around transit stations while smart growth often addresses broader issues, including the containment of development (or sprawl) at the urban periphery. While smart growth is often described as a new idea, it is in fact evocative of traditional development patterns that existed before the primacy of the automobile in the American cityscape.

1.3.2 TOD MEASURES, TECHNIQUES, AND INSTRUMENTS

TOD measures typically fall into two categories: promoting and managing development within station nodes and corridors; and broader planning programs and policies. These are illustrated below and described on the pages that follow.

These are primarily land use and urban design measures implemented at a district or neighborhood level.



Transit Station Focus: An ideal layout brings major uses within 0.5 mile or a 5 – 10 minute walk

¹ “Reporting Instructions of the Section 5309 New Starts Criteria,” Federal Transit Administration, July 2001

² “The Zoning and Real Estate Implications of Transit-Oriented Development.” Legal Research Digest, Transit Cooperative Research Program, January 1999

1.3.2.1 Transit Station Focus

In order to effectively encourage transit use, development specifically tailored for transit users should be located within a reasonable walking (or shuttle) distance from the transit station. The recommended distance



Density: Higher densities, including housing, provide greater user support of the transit system (San Antonio, TX)

for TOD is within approximately 0.5 miles or a 5 – 10 minute walk (or short ride) from the place of origin to the transit stop.

1.3.2.2 Density

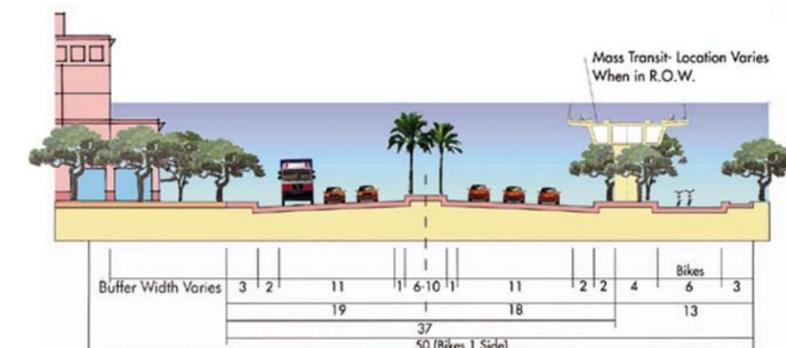
A successful element in TOD is density that is typically higher than American neighborhood

averages. These densities can be obtained through transit-supportive land use regulations such as special use zoning districts, overlay districts, density and parking bonuses, particularly in exchange for the provision of transit facilities or specific urban design features.

1.3.2.3 Bulk, Setback, and Area Controls

TOD ordinances and regulations have several features that distinguish them from conventional zoning regulations. For example, maximum setbacks, as opposed to minimum setbacks, require buildings to be built closer to the street. This not only encourages the establishment of parking and other automobile-related services at the rear of the buildings, it also encourages pedestrian activity at the street level. Another distinguishing feature of a TOD ordinance includes the reduction of frontage and lot size requirements. This encourages higher densities in the vicinity

of transit stations. Such ordinances may also mandate special design features and amenities such as colonnades,

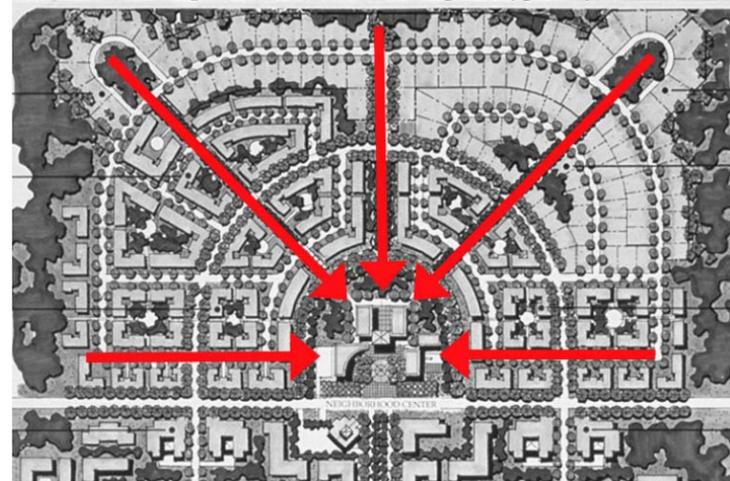


Bulk, Setback, and Area Controls: Setbacks can be designed to encourage transit use

front porches, and rear parking, as well as criteria for aesthetic and/or architectural compatibility with adjacent uses.

1.3.2.4 Urban Form and Mixed Uses

A typical TOD contains a mixture of residential and nonresidential uses designed to accomplish several objectives such as locating residences and employment destinations in close proximity where the likelihood of walking or commuting by transit is greatly increased. Also, nonresidential uses, including day care and retail establishments, add to the convenience of the commuter. This mixture of uses is designed to create a community rather than a single-use bedroom complex typically found in suburban



Street Patterns and Parking Restrictions: Non-grid street patterns make it easier for residents and users to identify with the transit station

areas.

1.3.2.5 Street Patterns and Parking Restrictions

Under a TOD, the traditional grid pattern of streets is transformed where appropriate to a layout inclusive of hub and spoke patterns so as to provide direct access to transit stations. TODs also typically feature narrow streets, which are designed to provide a form of traffic calming by minimizing traffic speeds and through traffic while devoting more streetscape to pedestrian use. On-street parking is encouraged as another form of traffic calming as well as providing a safe buffer for pedestrians on the sidewalk. TOD ordinances typically discourage or restrict wide expanses of off-street parking, as large parking lots tend to encourage travel by automobile as well as impede pedestrian activity.



TOD Transportation Infrastructure: The quality of the transportation infrastructure (including attractive and inviting transit vehicles) will be a factor in encouraging TOD

1.3.2.6 TOD Transportation Infrastructure

In addition to land use patterns, TOD can also be supported by the installation and operation of specialized transportation infrastructure, such as people movers, shuttle busses, elevated walkways, and other systems that facilitate the movement of people between the station and the rest of the district.

1.3.3 BROADER PLANNING PROGRAMS AND POLICIES

Many of these initiatives involve broader policies, often implemented over a wider geographic area. While they are not land use measures in the strict sense, their intended effect is to encourage transit-oriented development at the neighborhood scale. Significant examples follow.

1.3.3.1 Area-wide Planning and Smart Growth Management

For development to occur under TOD regulations, development at the periphery of transportation corridors should be controlled as well. This helps curtail sprawl and channel development into those areas where TOD can thrive. Some regions and states employ growth management techniques, including urban growth boundaries (UGB) as a way of controlling such development. An UGB is a mapped line that separates urbanized or developable from rural land, and within which urban growth is contained for a specific period of time. Another growth control technique is the tier system. This technique involves the geographic and functional division of a planning area into sub areas reserved for specialized treatment. These sub areas are commonly designated as planned growth areas. Transportation corridors can be integrated into areas governed by these two techniques.

1.3.3.2 Joint Development

Joint development refers to the development of real estate that is integrated with a transit station or other transit facility. Such development may include a retail facility directly linked to a transit terminal by a pedestrian walkway or to an office tower built in the air rights over a transit terminal. It combines public and private sector resources to achieve a project that will benefit both sectors. The zoning and land use controls adopted by the local government must be carefully considered in the joint development process. Approval by the local authorities may be required for construction and development of the area.

1.3.3.3 Transfer of Development Rights

Transfer of development rights (TDR) allows landowners in restricted or sending areas to transfer densities and other development rights to landowners in areas appropriate for higher densities (receiving areas). TDRs can be used to support transit-oriented developments by designating the areas around the transit stops as receiving areas. This allows developers a degree of leeway with local zoning and land use regulations.

1.3.3.4 Fiscal Incentives for Infill

Special development privileges (and in some cases subsidies or exemptions) could be awarded to developers who agree to invest in transit-oriented facilities and development projects.

1.3.3.5 Disincentives for Automobile Use

Parking and fuel taxes are examples of disincentives to the use of the private automobiles; these however must be implemented on an area-wide level if they are to effectively help channel development and activities to the transit station districts where users can avoid these penalties by using the transit system.

1.4 BENEFITS OF TRANSIT-ORIENTED DEVELOPMENT

While the full impacts of TOD can only be determined through a macro-economic study that considers both the costs and benefits of the NOLRT, it is possible to identify some of the typical benefits of TOD that have accrued to other communities that have implemented similar projects. These include:

- Increased land values near stations, adding to the region’s tax base
- Savings in time for daily commuting (less congestion) and in some cases, the opportunity to live and work in the same area
- Impetus for new regionally significant development

- Quality of life improvements (less sprawl, more open space; creating of new urban centers; higher quality of street life; improved sense of community)
- Conservation of resources (energy, water, others)
- Optimal use of land, by encouraging infill
- Proving greater access to employment opportunities for people dependent on public transit
- An inducement to tourism, if the transit experience is high quality and linked to tourism destinations
- Halt of urban decline

A final benefit of TOD is that, while relying on transit, it becomes a driver and continuing demand factor for the transit system itself. In this way, transit-oriented development and the transit system become mutually reinforcing elements of sustainable development.

1.5 HOW TOD CAN BE ACHIEVED

TOD cannot be implemented in a vacuum; it has to become part of the planning processes and procedures of the affected jurisdictions along the NOLRT corridor. At an immediate level it should be determined if the proposed TOD measures are concurrent or in any way in conflict with these jurisdiction's current plans. At a more pro-active level, the local authorities should prepare specific plans, development agreements, special ordinances (such as planned unit development), and capital improvement programs that incorporate these TOD measures.



Section 2 - Background

This section presents a brief overview of the New Orleans Light Rail Transit (NOLRT) corridor as currently under study in the Alternative Analysis/Draft Environmental Impact Statement (AA/DEIS). The AA/DEIS was nearing completion at the end of 2003, when local officials became interested in proposed other solutions for the corridor, including commuter rail along the parallel rail freight line, and bus rapid transit (BRT).

As of early 2005, the RPC and LA-DOTD are contracting consulting services for completion of the AA/DEIS for the corridor. The completion of the study later in 2005, will include evaluation of these other modal alternatives, and complete all required documentation.

2.1 REGIONAL CONTEXT FOR LRT AND TOD PLANNING

The following description highlights features of the corridor and the LRT alternative in general terms, assuming the completed AA/DEIS will continue to recommend the LRT as the “locally preferred alternative” for implementation.

2.1.1 NOLRT CORRIDOR PROFILE

A modern LRT system from Louis Armstrong International Airport (LAIA) to the Union Passenger Terminal (UPT) in downtown New Orleans would be a landmark project. It would bring together in partnership the city of New Orleans, Jefferson Parish, the city of Kenner, the Regional Transit Authority (RTA), LAIA, and other local stakeholders.

The proposed 12-mile transit corridor connecting LAIA and the central business district (CBD) is illustrated in Figure 2.1. A properly designed and operated modern LRT system would attract and serve visitors arriving at LAIA as well as local travel within a congested east-west corridor.

A feasible right-of-way (ROW) corridor for the construction of such a system became available in 1985, when the Kansas City Southern (KCS) Railroad abandoned over five miles of its track adjacent to Airline Drive (US 61) between LAIA and downtown New Orleans. The ROW has generally been preserved for the possible construction of a transit line.

By connecting this abandoned segment and utilization of 4 miles of ROW controlled by the New Orleans Union Passenger Terminal (NOUPT), a continuous 12-mile corridor from LAIA to downtown be created.



KCS Railroad ROW Along Airline Drive

Recent studies indicate this 12-mile ROW corridor has significant potential for construction of the NOLRT system:

- Outstanding terminal station potential at LAIA in the city of Kenner, and at the UPT multimodal facility in downtown New Orleans with potential connections to the new RTA Canal Streetcar line
- Potential to utilize bi-modal vehicles operable on both the airport to downtown line and along the streetcar line, and to maximize use of maintenance facilities with the RTA Canal Streetcar line
- Linkage of major regional travel attractions, including LAIA, Zephyr Stadium, Xavier University, New Orleans Arena, the Louisiana Superdome, hotels, and employment and health care facilities in downtown New Orleans
- Viable locations for intermediate stations within the corridor, with park-and-ride facilities and feeder bus connections
- Few major grade crossings
- Minimal potential displacement of buildings or people
- Stimulus to economic development and transit-oriented land use near stations
- Opportunity to expand westward to I-310, to the North Shore, and eastward to connect



NOUPT Railroad ROW North of I-10, East of Carrollton Avenue, Looking East towards Downtown New Orleans

Community leaders in New Orleans and Jefferson Parish have identified the stated purpose for the NOLRT project as follows:

“To link key transportation and business activity centers together providing reliable, affordable transportation, and supporting sustained economic growth.”¹



¹ Presentation materials prepared for and used at a Senate and House Appropriation Committees joint presentation by Mayor Marc Morial, City of New Orleans and President Tim Coulon, Jefferson Parish, April 2001.

2.1.2 GENERALIZED NOLRT CORRIDOR LAND USE

As presented in detail in the Phase-2 Report, the proposed NOLRT corridor extends from the LAIA in the city of Kenner, through Jefferson and Orleans Parishes, to the UPT in downtown New Orleans. In general, the area is considered approaching build-out, with little land left to develop. The portion of Jefferson Parish between the Mississippi River and Lake Pontchartrain has a few hundred acres of vacant land that can be developed. In Orleans Parish there is little developable land remaining. As illustrated in Figures 2.2–2.4, the land within the corridor is predominantly occupied by residential and light commercial development.

Table 2.1 provides an approximation of land use by general land use category for the overall NOLRT corridor as shown in Figures 2.2 through 2.4. This information is based on Regional Planning Commission (RPC) maintained Geographic Information System (GIS) preliminary databases for Orleans and Jefferson Parish, and for the city of Kenner. The various detailed land use categories (shown in Section 5) were condensed into these general categories for the purpose of the corridor representation.

Within Jefferson Parish the corridor begins in the city of Kenner and is categorized as urban in character. The predominant land use in the Jefferson Parish portion of the corridor is residential.

The Elmwood industrial area roughly bounded by Airline Drive, Clearview Parkway, the Mississippi River, and Hickory Avenue, accounts for much of the industrial land use in the Jefferson Parish section of the corridor.

The NOLRT route through Jefferson Parish would run along the south side of Airline Drive, which is primarily vacant, including the abandoned KCS railroad ROW. Conversely, the north side of Airline Drive is fully developed, containing numerous retail establishments. The alternative alignment follows Earhart Expressway through a mostly open and industrial area.

The portion of the corridor within Orleans Parish passes through the city of New Orleans and is heavily urbanized. As depicted in Figure 2.4, land use in this area is predominantly light industrial, commercial, and residential. In the eastern-most section of the corridor, from the Orleans Parish line to the terminus at the UPT, there is a mix between residential, industrial, commercial, and office land uses.

Table 2.1 Approximate Distribution of Land Use (percent) by Category and by Parish within the NOLRT Project Corridor

Area	Residential	Commercial	Institutional	Office	Light Industrial	Parkland	Open Space
Jefferson Parish	40	25	5	5	20	2	3
Orleans Parish	10	30	4	30	25	0	1
NOLRT Project Corridor	30	27	5	13	22	1	2

2.1.3 MAJOR ACTIVITY AND EMPLOYMENT CENTERS

Proximity to major activity and employment centers is one of the criteria used in evaluating the feasibility of station sites. The following is a summary of the major centers located within the potential NOLRT corridor, accompanied with a brief description of each.

Jefferson Parish

LAIA – This international airport serves approximately 10 million passengers annually. The airport is presently ranked 52nd in cargo volume in the U.S.

Rivertown – This sixteen-block historic district, located near the Mississippi River levee in the city of Kenner, offers a host of cultural and family attractions as well as providing an educational experience for tourists, business, and convention visitors. Attractions include the following: Mardi Gras Museum; Children’s Castle; Louisiana Toy Train Museum; Louisiana Wildlife Museum and Aquarium; Saints Hall of Fame; Rivertown Repertory Theatre; Science Complex; Space Station Kenner; Fine Arts Gallery; and the Cannes Brulee Native American Village.

LaSalle’s Landing – This feature is located at the edge of the city of Kenner’s Rivertown area and offers a riverboat dock and a picturesque view of the Mississippi River.

LaSalle Park – This parish-operated park currently includes a walking trail and numerous baseball fields. Additionally, a soccer field is presently

under construction and there are plans to add a pool to the park’s amenities.

Zephyr Stadium – This baseball stadium is the home field for the New Orleans Zephyrs, the AAA farm team of the Houston Astros major league baseball team.

Airline Skate Center – This roller skating rink is open seven days a week and caters to persons of all ages. The rink is available for private parties as well as school and social events.

Elmwood Business and Industrial Park – This business and light industry center is located south of the proposed NOLRT corridor. The general area contains several distribution centers, warehousing, and light industrial uses as well the East Bank Jefferson Parish government complex, the Elmwood Shopping Center, and the Palace Movie Theatres.

Saints Training Facility – This is the seasonal training facility for the New Orleans Saints of the National Football League (NFL).

Victory Fellowship Church – This is a large Christian church with a membership of over 2,000 people.

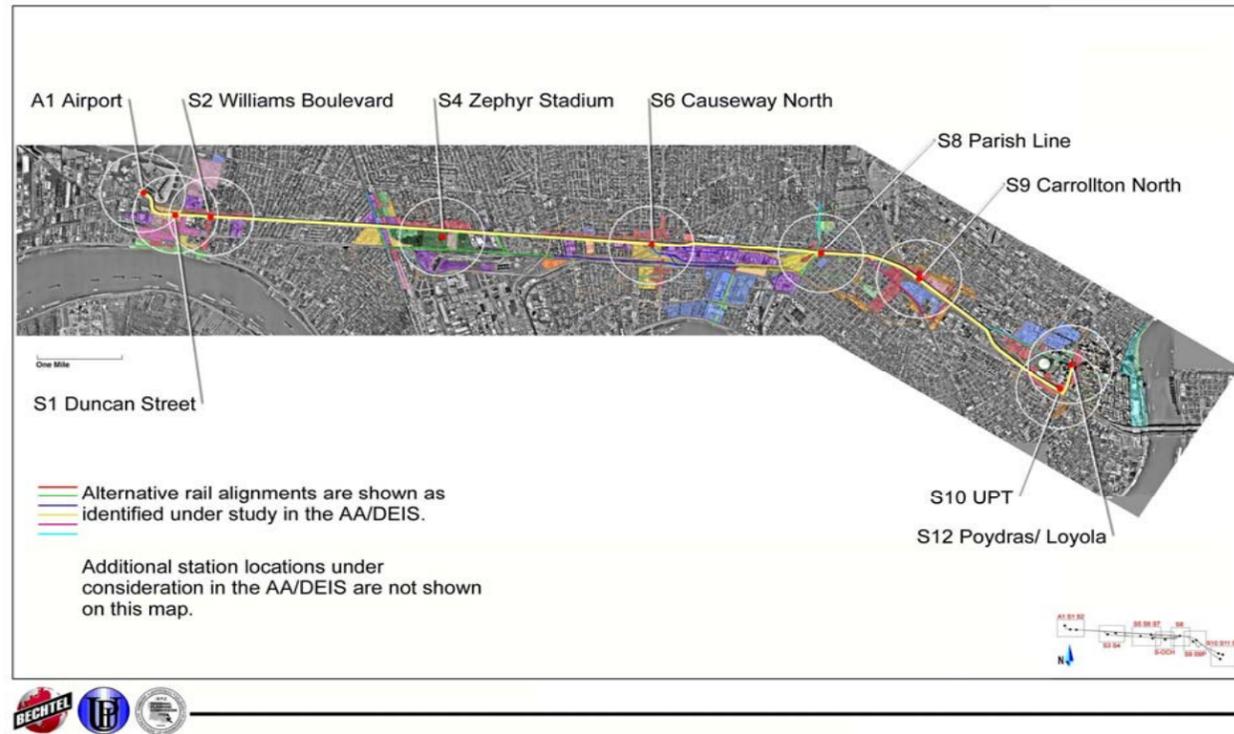
Louisiana Technical College – This is the Jefferson Parish campus of a vocational college that offers classes during the day and night.

Airline Park Shopping Center – This is a moderate size strip mall with several retail stores, drugstores, standard and fast food restaurants, and banks.

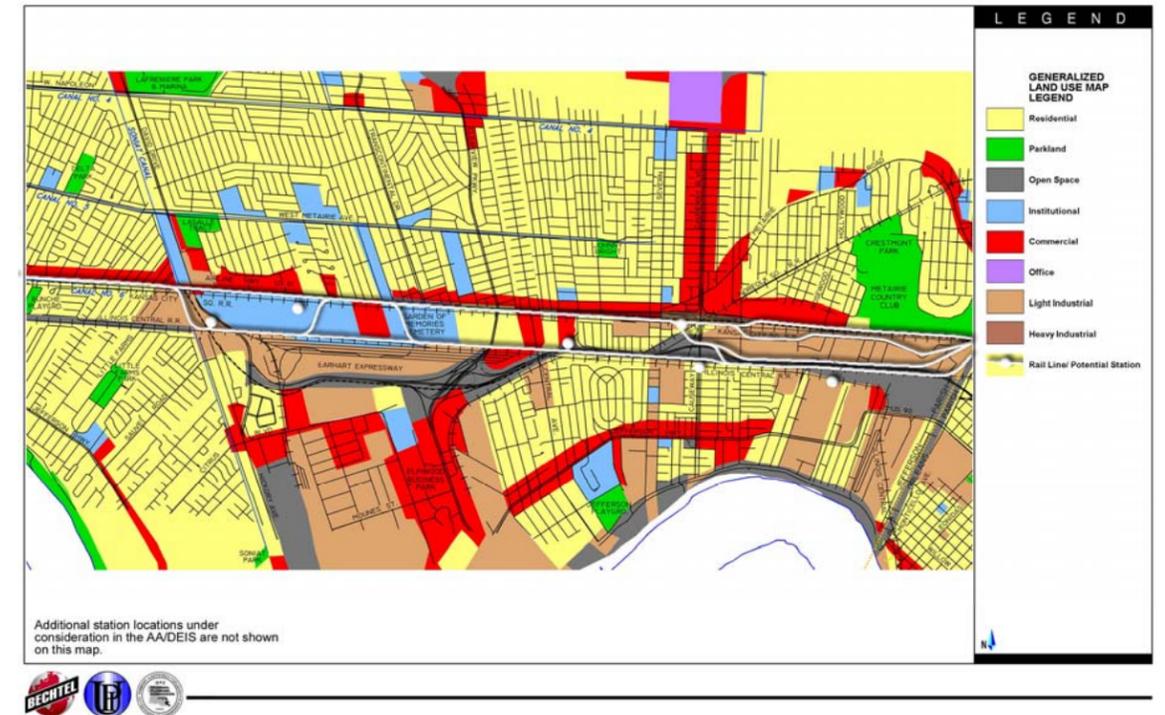
Anheuser Busch Distributor – This is a local distribution center for Budweiser beer.

Sam’s Wholesale Club – This national chain-store, which sells grocery, apparel, electronics, furniture, paper goods, etc. in bulk, is presently under construction, and is anticipated to provide a substantial amount of revenue to the general area.

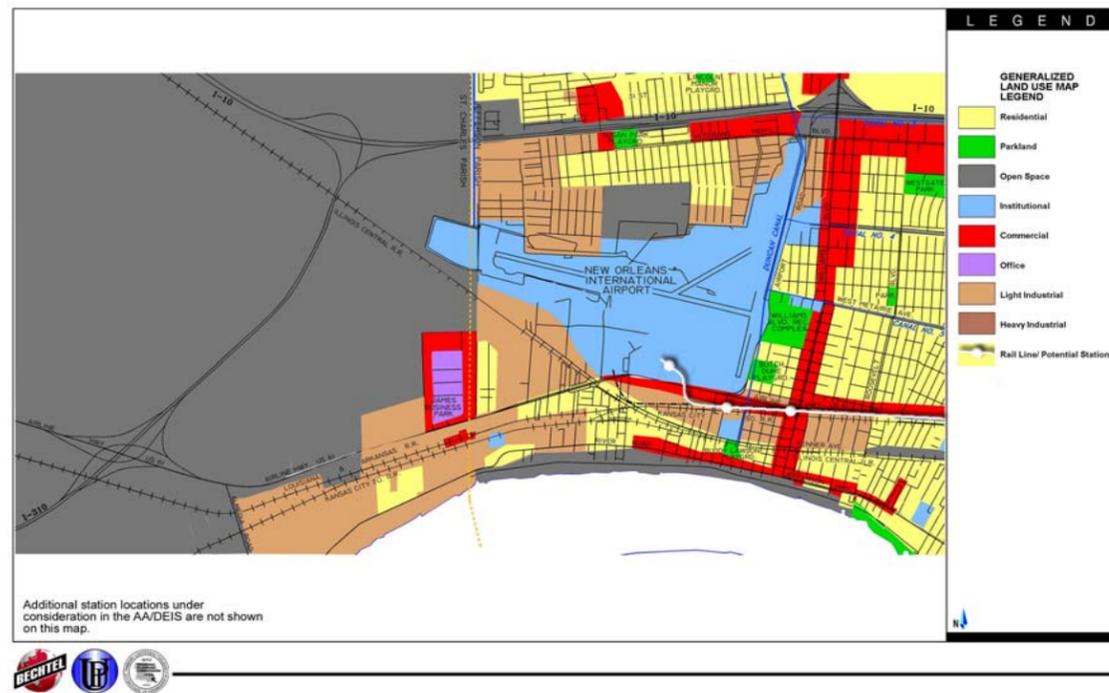
Jefferson Parish Sheriff’s Office – This is the main law enforcement office for the Eastbank of Jefferson Parish.



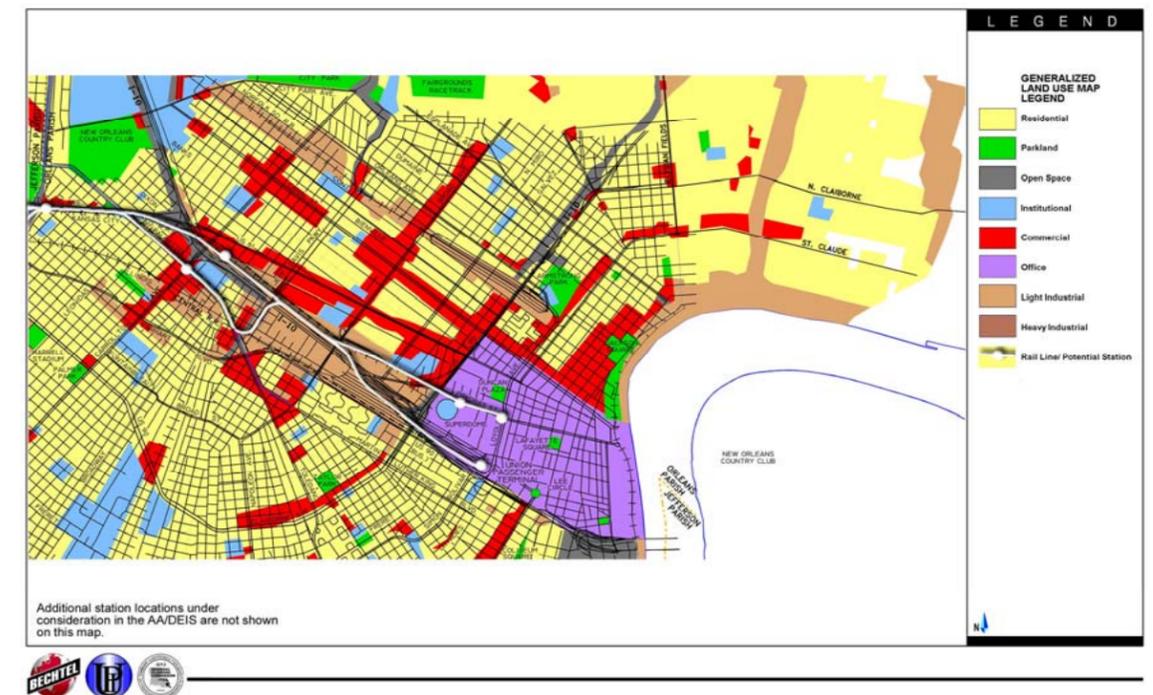
OVERVIEW MAP OF NEW ORLEANS AREA LRT CORRIDOR (FIGURE 2.1)



GENERALIZED LAND USE MAP OF LRT CORRIDOR - SECTION 2 (FIGURE 2.3)



GENERALIZED LAND USE MAP OF LRT CORRIDOR - SECTION 1 (FIGURE 2.2)



GENERALIZED LAND USE MAP OF LRT CORRIDOR - SECTION 3 (FIGURE 2.4)

Strip Shopping Mall at Labarre Road – This strip mall was constructed at the site of a former Schwegman’s grocery store and includes several small retail stores and offices as well as a Save-a-Center grocery store.

Carlone’s Dinner Theatre – This local dinner theatre holds nightly performances as well as luncheons, wedding receptions, parties, and other uses.

Labarre Industrial/Business Park – This large business and industrial complex includes several light industrial businesses, warehouses, railroad yards, and their associated uses.

Orleans Parish

Xavier University – This is a major local university with approximately 4,000 students.

Carrollton Shopping Center – This is a strip shopping mall that contains several retail and apparel stores.

Mid-City Bowling Lanes – This is a combination musical venue and bowling alley that attracts local and regional musical acts.

Superdome – This large enclosed stadium is the playing field for the New Orleans Saints NFL football team. It also hosts major sporting events including the Super Bowl, the Sugar Bowl, the NCAA Final Four, as well as concerts, fairs, and various community events.

New Orleans Arena – This is a new sports arena that is home to the New Orleans (formerly Charlotte) Hornets NBA basketball team. It also hosts musical concerts, other productions, and sporting events.

New Orleans Regional Medical Complex – This complex includes the Medical Center of Louisiana, the Veterans Administration Hospital, University Hospital, Tulane University Medical School, Louisiana State University Medical School, as well as associated medical uses such as doctors’ offices, clinics, and pharmacies.

New Orleans Centre – This is a shopping mall with two major department stores, Lord & Taylor, and Macy’s, several retail and apparel stores, a food court, and fitness center.

Civic Center – This area includes the New Orleans City Hall, the State Building, the State Courthouse, as well as Civil and Juvenile Courts.

Warehouse and Arts Districts – These districts nearby the Union Passenger Terminal, include the Contemporary Arts Center, the National D-Day Museum, the Ogden Museum of Southern Art, several art galleries and restaurants, hotels, and apartments and condominiums.

2.1.4 PROPOSED AREA REDEVELOPMENT PLANS

Major master planning efforts were recently completed for Jefferson Parish and the City of Kenner. The city of New Orleans is also undergoing a master planning effort, and in 2004 completed the transportation element of its master plan.

Over the past several years, there has been a renewed interest in the redevelopment of the Airline Drive corridor. In 1997, the Airline Drive Corridor Task Force, a private organization involved with beautification and clean-up efforts, lobbied the State legislature and successfully had Airline Highway renamed to Airline Drive (the portion in unincorporated Jefferson Parish).

The Jefferson Parish Economic Development Commission (JEDCO) has designated Airline Drive between Roosevelt Boulevard and Monticello Avenue as an Economic Development District. This designation allows businesses located within the district to be eligible to participate in the Louisiana Restoration Tax Abatement Program. This program provides individual property owners and businesses that improve, renovate, or expand existing structures the right to pay ad valorem taxes based on the assessed value of the property at pre-improvement levels for five years.

Portions of the Airline Drive corridor are also designated as Enterprise Zones. The Louisiana Enterprise Zone program offers businesses a one-time tax credit of \$2,500 for each new net job created during the first five years of the project. Credits may be used to satisfy state corporate income and corporate franchise tax obligations. Other benefits include a rebate of state sales/use taxes on construction materials and equipment.

The following areas are designated as Enterprise Zones:

North Side of Airline Drive:

- St. Charles Parish line to Croften Road (city of Kenner)
- Airport Road to Clay Street (city of Kenner)
- North Howard Street to Market Street
- Beresford Street to New Orleans city limits

South Side of Airline Drive:

- St. Charles Parish line to Filmore Street (city of Kenner)
- Shrewsbury Road to New Orleans city limits

In 1999, JEDCO also initiated a formal community-based planning process known as The Jefferson Edge. The purpose of this process was to develop a parish-wide comprehensive economic development strategic plan. The plan includes a community of demographic, economic and educational data for the parish as well as a cluster analysis that reviewed the concentration of various industries by employment and compared them to state and national averages.

The Downtown Development District (DDD) of New Orleans, a self-taxing business improvement district, initiated a multi-million dollar capital improvement project called The Downtown Revival. The project includes downtown-wide improvements such as extensive landscaping, sidewalk upgrades and installation of a wayfinding sign system designed to steer visitors around downtown. The centerpiece of the project is a constituent-driven economic development plan that will revive Canal Street as an entertainment and retail district.

The DDD’s Economic Development Action Plan focuses on the recruitment of new businesses to the downtown area as well as the retention of existing businesses, with a particular emphasis on Canal Street. The DDD provides financial assistance to businesses that locate on Canal Street via the Façade Improvement Loan Program.

2.1.5 IDENTIFICATION OF POTENTIAL STATION SITES

The proposed NOLRT system is envisioned to carry local commuters as well as airline passengers between LAIA and downtown. Intervening stations are essential for connectivity to the area transportation network. Additional potential station locations have been added to an early list based on progress of the AA/DEIS and input received through the public involvement process.

Table 2.2 is a summary of the current universe of potential NOLRT stations under investigation in the AA/DEIS, showing those which are evaluated in the Phase-2 report in considerable detail. The list also includes a preliminary station type/classification indicating potential functional requirements.

Table 2.2. Potential NOLRT Station Locations

Station No.	Station Name	Station Type/Classification
A1	Airport	Terminal Station/Regional/Multi-modal
S1	Duncan Street	Regional/Multimodal/Major PNR
S2	Williams Boulevard	Community-Neighborhood/Walkup/Bus Transfers
	Bunche Village	Community-Neighborhood/Walkup/Bus Transfers
S3	Dickory Avenue	Regional/Multimodal/Minor PNR
S4	Zephyr Stadium	Regional/Multimodal/Minor PNR
	Clearview Parkway	Community-Neighborhood/Walkup/Bus Transfers
S5	Cleary Avenue	Community-Neighborhood/Walkup/Bus Transfers
S6	Causeway North	Regional/Multimodal/Major PNR
S7*	Causeway South	Regional/Multimodal/Major PNR
SOCH	Ochsner Hospital	Community-Neighborhood/Walkup/Bus Transfers/Neighborhood PNR
S8	Parish Line	Community-Neighborhood/Walkup/Bus Transfers
S9	Carrollton North	Community-Neighborhood/Walkup/Bus Transfers
S9P*	Carrollton South	Community-Neighborhood/Walkup/Bus Transfers
	Broad Street	Community-Neighborhood/Walkup/Bus Transfers
S10	Union Passenger Terminal	Terminal Station/Regional/Multi-modal/CBD
	New Orleans Regional Medical Center	Community-Neighborhood/Walkup/Bus Transfers
S11	Superdome	CBD/Bus Transfers
S12	Poydras/Loyola	CBD/Bus Transfers

Locations studied in detail in the Concepts for Transit-Oriented Development, Phase-2 report

Additional locations studied in the AA/DEIS study

2.2 EXPANDING TRANSIT SERVICES IN THE NEW ORLEANS REGION

The Regional Transit Authority (RTA) provides an extensive public transit system focused on Orleans Parish. Annually over 54 million riders use the system of buses, streetcars, and paratransit vehicles. RTA is noted for one of the highest rates of ridership per capita in the nation. However, perceptions are that ridership is declining in recent years, and the system has experienced some “image problems” regarding rider safety, cleanliness and convenience.²

Today, the RTA is currently focused on responding to needs and expanding upon a rich history in serving residents and visitors in Orleans Parish. The RTA system represents 59 major bus routes, 364 fixed route large and medium buses serving 2,800 bus stops, 65 streetcars serving three streetcar lines, three active Park and Ride facilities, paratransit shuttle services, and three river ferry lines. The Streetcar lines include the historic St. Charles Avenue Streetcar which is the oldest continuously operated streetcar line in the world; the Riverfront Streetcar line opened in 1992 predominately serving tourists; and the Canal Street Streetcar line which opened to revenue service in early 2004.

The opening of the Canal Street Streetcar line starts an exciting new era for public transit service in New Orleans, as described at the RTA Website³:

“After almost forty years, the Canal streetcar line is running again. The new line opened for business on April 18th, 2004 and runs over five and a half miles from the Mississippi River to City Park Avenue with a spur along North Carrollton Avenue.

The Canal streetcar line is expected to carry more than 31,000 riders each day by 2015, bringing local residents to work and play downtown and tourists to the many shops, restaurants, art galleries and entertainment venues in historic Mid-City.

The Canal streetcar line includes a fleet of 24 new streetcars, which were constructed from the wheels up by a special team of RTA blacksmiths, carpenters, electricians and mechanics. The streetcars are designed to resemble the Perley Thomas models, which began running on Canal Street in the 1920s and are still in use on the St. Charles line.

The Canal Street streetcar is a return to the days when New Orleans visitors and residents alike enjoyed efficient and economical transit, with added comfort features including air conditioning, a high-tech, low noise braking system and ADA-compliant accessibility lifts for passengers with disabilities.

The Canal streetcar route takes riders on a historic tour of New Orleans. The route starts on the Riverfront at the French Market, the country's oldest public marketplace. The line then turns onto Canal Street in the heart of the city's Central Business District, bordering the famous French Quarter. The Canal line moves from the CBD to Mid-City, one of New Orleans' most popular neighborhoods, to end at City Park Avenue and the historic city cemeteries.

A spur along North Carrollton Avenue connects the line from City Park at Beauregard Circle to Canal Street. City Park visitors can enjoy more than 1,500 acres of recreation space, botanical gardens and family activities. The Canal Streetcar stops across from the New Orleans Museum of Art, and just blocks from the Fairgrounds.”

Since 1985 the RTA has also provided service to the City of Kenner, linking the nearby suburb with fixed route service to the New Orleans downtown area. At or near the Jefferson Parish line the RTA also provides for transfers to the Jefferson Transit (JeT) buses serving adjacent Jefferson Parish.

JeT provides a fixed-route service for six East Bank and 13 West Bank routes. Also in Jefferson Parish, the Mobility Impaired Transit System (MITS) provides special transportation services or paratransit services. In total, the JeT operates fixed-route service with 49 vehicles; and Jefferson Parish operates 16 vehicles in delivery of MITS services. Annually over 4 million riders use these available transit services in Jefferson Parish.⁴

The proposed LRT line provides great opportunity to enhance transit linkages between Jefferson Parish, the City of Kenner and Orleans Parish, and in particular to serve the congested east-west corridor with quality fixed-route transit services. Preliminary assessments, recently made for the AA/DEIS studies, indicate that linked-trips for both RTA and JeT would expand ridership and revenues for both systems.

The vision for the New Orleans Region for expanding the transit system, through development of the LRT project, is focused on several key themes as displayed on the next page.

These transit development themes establish background for development of Transit-Oriented-Development (TOD) policies and actions, as outlined in this policy plan.

² City of New Orleans, Transportation Plan, Situation Assessment, March 2004.

³ <http://www.regionaltransit.org/>

⁴ Envision Jefferson 2020, Jefferson Parish Comprehensive Plan, Transportation Element August 2003.

The Project

**12-mile light rail transit line:
Louis Armstrong International Airport to
Union Passenger Terminal Downtown**

NEW ORLEANS AND VICINITY

International Connections

- Coordinated bus and feeder service
- Park-and-ride
- Kiss-and-ride facilities at LRT stations

Alleviate Chronic Congestion

- ▶ Commute travel between outlying suburbs and New Orleans
- ▶ "Reverse commute" to jobs at LAIA
- ▶ Connections to uptown universities, hospitals, and clinics
- ▶ Visitor travel—airport to CBD
- ▶ Interstate travel access to UPT

Convenient Access

Station areas serving:

- ▶ Union Passenger Terminal in downtown
- ▶ City of New Orleans
- ▶ Jefferson Parish
- ▶ City of Kenner
- ▶ Louis Armstrong International Airport

The Light Rail Solution

- ▶ Relieves chronic congestion
- ▶ Provides access to jobs
- ▶ Creates mobility for transit-dependent riders
- ▶ Supports tourism and airport growth
- ▶ Creates cross-regional connections
- ▶ Stimulates new development
- ▶ Reduces air and noise pollution

Sustain Employment Growth

Transit support to growth centers in the CBD and Jefferson Parish

Year	Employment
1998	540,200
2006	622,400
2008	644,800
2020	770,700



Section 3 - Current and Recommended Planning Practices

This section presents an overview of regional and local land use and transportation planning supportive to transit-oriented development (TOD). While the planned airport to downtown LRT project will be focused on building the transit system, TOD is a complementary effort to create an implementation framework: and, to guide development of the station districts along the corridor in a way that reinforces the transit system and benefits surrounding communities.

Given the complexity of the multi-jurisdictional stakeholders that may be involved with the implementation of the NOLRT project, there is a critical need for project stakeholders to establish the needed organization and execution of a strategic action plan to support the project.

3.1 TRANSPORTATION AND LAND USE PLANNING IN THE NOLRT CORRIDOR

As outlined in the earlier Phase-2 report, a comprehensive corridor real estate development plan is an essential element of a successful LRT project in the East-West corridor. The overall objectives of the corridor real estate development plan are the following:

- Sustainable development of Brownfields otherwise left as marginalized areas
- Economic growth due to and generated from commercial development in the corridor
- Better assurance of smart growth along the infrastructure and around the station districts as identified in this report
- Value capture of all or part of the increased real estate values generated by the infrastructure project to the benefit of the stakeholders and communities along the corridor.

Local plans and zoning ordinances establish the foundation for preparation of a comprehensive corridor real estate development plan. For the East-West corridor, the three local jurisdictions --- City of Kenner, Jefferson Parish and the City of New Orleans --- are each vital stakeholders for success in this effort. The Regional Planning Commission (RPC) supports local jurisdiction effort through funding priority set in its Metropolitan Transportation Plan (MTP) and bi-annual Transportation Improvement Program (TIP).

Over the past several years, the RPC and each jurisdiction has made significant progress to update local planning data, land use and transportation plans, and revisions to zoning ordinances. Although more progress is needed, momentum is underway to support TOD in the East-West Corridor.

The following highlights the status of regional and local planning efforts in the New Orleans region for the proposed Airport to Downtown LRT Project (NOLRT) in the East-West Corridor. Table 3.1 provides a summary overview of each jurisdiction’s recent planning efforts.

3.1.1 NEW ORLEANS REGIONAL PLANNING COMMISSION

With the MTP adopted in late 2004, the RPC established ten principles for “Smart Growth” in the New Orleans region. The NOLRT affords an opportunity to implement regional infrastructure in accordance with the RPC Smart Growth Principles.

TOD in support of a viable rail transit project will require continued leadership by the regional government. The RPC as a key stakeholder in promoting these goals and principles is supporting planning efforts and establishing funding for projects. As the designated Metropolitan Planning Organization (MPO) the RPC represents the region’s local governments with Louisiana Department of Transportation and Development (LA-DOITD), federal agencies, and the Louisiana Congressional delegation in Washington D.C., establishing funding priorities and seeking discretionary funding.

On behalf of the region, the RPC is considering innovation in funding partnerships with the private sector. Through public-private partnering and stakeholder coordination, new opportunities exist to implement viable projects.

Evidence from projects around the country and recent studies funded by the RPC in the New Orleans region, point to the stimulus that transportation infrastructure plays to support economic development. The RPC has established the goal to “Develop and fund an intermodal transportation system that strives to support and promote economic development goals”. Success is dependent on the creation of workable agreements across jurisdictions and continued leadership provided by the regional organization, and innovation in project execution.

3.1.2 CITY OF NEW ORLEANS

The City of New Orleans has strategically updated elements of the citywide master plan over the past decade. In 2004, the Transportation element was adopted. Although lacking in TOD specific policies, the transportation plan establishes support for the “integration of land use and economic development with transportation planning”. Furthermore, of the key recommendations of the plan, it calls for expanding public transportation systems.

A primary concern in New Orleans is the preservation of existing communities, while encouraging economic development. As stated in the transportation plan, the major challenge facing transportation and land use planning on the neighborhood level involves realization of two critical community goals:

- Providing adequate infrastructure support to maintain viability of the historic neighborhood commercial and mixed use corridors and established institutional uses.
- Ensuring that traffic pressures imposed by these establishments do not diminish the residential quality of life.

For the NOLRT corridor, studies have identified potential TOD districts for several of the identified stations. Within New Orleans, these neighborhoods would vary from low to moderate density residential and mixed-use, to high-density downtown environments. In all locations evaluated in the earlier Phase-2 study, revitalization and potential for area-compatible development, were identified.

However, for TOD to occur in support of the LRT investments in the City of New Orleans, modifications may be required to the Land Use Plan (adopted in 1999), the Comprehensive Zoning Ordinance (CZO, draft document, 1999) and to the Transportation Plan. In general, these enabling documents must more specifically address the implementation toolkit needed for implementation of TOD that is responsive to community needs and goals.

3.1.3 JEFFERSON PARISH

In 2004, Jefferson Parish adopted the Envision Jefferson 2020 Plan establishing land use, transportation and implementation elements. This plan directly endorses the light-rail service and transit-oriented development in the East-West corridor (NOLRT project).

The Jefferson Parish plan is far-reaching, presenting guidelines for a diversity of land use categories. Furthermore, it establishes the basis for TOD to support the NOLRT project. For transit station areas, the plan calls for Community Mixed Use (CMU). This category includes medium density for office, commercial, residential, recreation lands and mixed-use centers. The CMU category will accommodate a land use mix containing residential with transit stops and stations, commercial, public, recreation and other uses. The minimum density is eight (8) dwelling units per acre with a maximum permitted residential density of twenty (20) dwelling units per acres for within a ¼ mile of a light rail transit station.

The Jefferson plan also addresses goals, projects and implementation tools. The plan supports light-rail transit and TOD development as an “economic engine” for the Airline Drive Corridor revitalization.

In recent years, Jefferson Parish further identified in the Airline Drive Zoning Study and in the business plan for the Jefferson Edge (adopted in May 2000 and currently being updated) the need to revitalize underutilized properties along Airline Drive. The zoning study identified the concept of an overly district to encourage beautification along the corridor. The Jefferson Edge, prepared by the Jefferson Economic Development Corporation (JEDCO) seeks to promote redevelopment of blighted and underutilized properties throughout the Parish, with specific emphasis given to the Airline Drive Corridor.

These recent and ongoing planning efforts in Jefferson Parish establish a strong institutional foundation for supporting TOD and the light rail project. Future emphasis should be placed on implementation tools, and minor adjustments to zoning and land use plan specification, for the realization of community focused station districts.

3.1.4 CITY OF KENNER

The City of Kenner, together with Jefferson and Orleans Parishes, are the primary regional stakeholders in the development of the airport to downtown light rail transit project, and the implementation of TOD.

Planning efforts in the City of Kenner, with the assistance of the University of New Orleans College of Urban and Public Affairs, has produced an extensive survey of land use parcels and classifications according to the American Planning Association (APA) standards. These efforts support the City of Kenner "Pattern for Progress" land use and transportation study. As of this date, the plan has not been released to the public. The planning process did include community imaging and workshops.

The opportunities abound for the rail transit system and TOD to impact positively upon the City of Kenner’s future. The Louis Armstrong International Airport is located within the City of Kenner, and impacts by the airport are of primary concern. Yet the City does benefit from the economic activity generated by the airport.

Plans to build the light rail transit system and TOD must be in concert with long-term development plan for the City of Kenner. Already successful developments in the City of Kenner, such as the Esplanade Mall and Rivertown, can be enhanced further with the transit investment, and carefully structured development plans for station districts at and near the airport.

Completion of the long-range plan and the identification of implementation tools for TOD is key to the City of Kenner’s role supporting development of the airport to downtown LRT project.

3.1.5 NEW ORLEANS REGIONAL TRANSIT AUTHORITY (RTA)

The RTA, as the regional transit agency providing service in Orleans and on a limited basis in Jefferson Parish, will be a primary stakeholder and potential owner in the development of a LRT project in the airport to downtown corridor. In recent years the RTA has worked effectively with the City of New Orleans Planning Commission and other City Departments, to sponsor and conduct environmental studies and transit development planning.

The RTA will influence the design of the proposed LRT airport to downtown transit project and the land development of station districts. Working together with the other governmental stakeholders, the RTA can apply expertise gained from expansion of the Streetcar lines, linking the new transit corridor, and contributing directly to the establishment of land use and transportation policies that support TOD.

In support of local and corridor planning overall, the RTA can become an active participant in leveraging development opportunities around its stations through public-private partnerships. Furthermore, the RTA can support the project through joint development policies, which may include the following:

- Project proposals initiations/solicitation
- Proposal evaluation
- Exclusive negotiations agreements
- Development agreements
- Adjacent construction guidelines

The current and future focus of the RTA will continue to be on the delivery of cost effective transit service in the region and the growth in transit patronage. To the extent that an LRT project can be executed to stimulate growth in transit use and revenue for the overall RTA system, participation in these development roles may be attractive to the RTA leadership.

3.1.6. JEFFERSON PARISH DEPARTMENT OF TRANSIT ADMINISTRATION (JET)

The JeT in a similar manner and in cooperation with all the stakeholders can also play an effective role in support of the airport to downtown LRT project and TOD. In Jefferson Parish, the JeT may serve as the primary feeder service linking neighborhoods to the LRT service. How

best to provide this important function will require carefully planning for accessibility and efficiency. These planning efforts will influence directly land use, zoning and community design decisions.

3.1.7 OTHER GOVERNMENTAL AND NON-GOVERNMENTAL PARTICIPANTS

In addition to the planning and transportation offices of the three local jurisdictions, other federal, state and local government and non-governmental participants may directly influence policies for TOD in the East-West corridor and the region. These include the following:

- Federal direct role in TOD and joint development of land use in transit corridors includes: New Joint Development, Federal Transit Administration (FTA) 1997 reinterpretation of the Federal Common Grant Rule; FTA, New Starts Criteria: FTA Livable Communities program; Location Efficient Mortgage (LEM) programs; Environmental Protection Agency Brownfields Initiative; HUD housing subsidy programs; and, Congestion Management/Air Quality (CMAQ) funding program.
- The Louisiana Department of Transportation and Development (LA-DOTD) can be a major financial stakeholder in the LRT project.
- New Orleans Downtown Development District, Department of Public Works, Mayors Office of Economic Development and the Louis Armstrong New Orleans Airport Board.
- Jefferson Economic Development Corporation (JEDCO).
- University of New Orleans College of Urban and Public Affairs.
- Special Task Forces and other citizen interest groups including but not limited to the following: Committee for a Better New Orleans, Metro Bicycle Coalition, Neighborhood Associations, Trust for Public Land, Sierra Club, Campaign for Sustainable Transit Intermodal Airport Facilities Group and various neighborhood associations.

The development of TOD has been successful in other regions where strong coalitions have been established among the primary stakeholders and supporting participants.

Table 3.1. Summary of Current Local Planning Efforts

Jurisdiction	Study or Plan	Area	Highlights Applicable to Transit-Oriented Development Policies
Regional Planning Commission	<p>Metropolitan Transportation Plan (MTP, adopted October 2004)</p> <p>One of two complementary documents prepared by the RPC, as the designated Metropolitan Planning Organization (MPO). The MTP is the chief legal document reflecting the resources, the fundamental planning process, and the selection of project for the region. The Transportation Improvement Program (TIP) details funding and programming for the first three to five years of the plan. The RPC reviews the MTP every three years, and the TIP is completed (revised) bi-annually.</p> <p>The MTP is a 25-year forecast of transportation improvements and projected funding in the MPRO urbanized area. It incorporates policy considerations and related long term impacts.</p>	Region-wide	<p>The RPC embraces Smart Growth:</p> <ul style="list-style-type: none"> ▪ Principle 1 – Mixed Land Uses ▪ Principle 2 – Compact Building Design ▪ Principle 3 – Mixed Housing Opportunities Including Styles and Levels of Affordability ▪ Principle 4 – Walkable Neighborhoods ▪ Principle 5 – Distinctive, Attractive Communities with a Strong Sense of Place ▪ Principle 6 – Preservation of Open Space, Environmentally Sensitive Land, and Culturally Significant Areas/Buildings ▪ Principle 7 – Reinvestment in Existing Buildings/Communities and Balanced Regional Development ▪ Principle 8 – Mixed Transportation Options ▪ Principle 9 – Fair, Cost-Effective Development Options ▪ Principle 10 – Active Citizen Participation in the Development Process <p>Principle goals in relationship to transportation include:</p> <ul style="list-style-type: none"> ▪ Goal 1 – Repair and maintain the existing highway and transit infrastructure. ▪ Goal 2 – Develop and fund an intermodal transportation system that strives to support and promote economic development goals. ▪ Goal 3 – Provide improved transportation services to persons with limited mobility, including the disabled, the poor, those in isolated communities, and other persons without convenient access to or financial ability to operate automobiles. ▪ Goal 4 – Develop and manage the transportation system with ▪ Goal 5 – Work with the state of Louisiana and nearby regions to encourage a diverse choice of options for travel beyond the New Orleans region, including air, high-speed rail, bus, and auto transportation modes. ▪ Goal 6 – Promote and fund the development and deployment of intelligent transportation management including incident management techniques and procedures to reduce congestion on the transportation system throughout the metropolitan area.
<p>Jefferson Parish</p> <p>Jefferson Economic Development Corporation (JEDCO)</p>	<p>The Jefferson Edge (adopted May 2000)</p> <p>The original Jefferson Edge is a five-year strategic plan that was adopted in 2000. The Jefferson Edge is being updated to prepare an economic development strategy for Jefferson Parish through 2010</p>	Parish-wide	<p>Vision Statement: To promote sustainable growth, attract high wage industries, encourage technology development, and to offer a superior quality of life.</p> <p>Regional Development Objectives:</p> <ul style="list-style-type: none"> ▪ Promote economic opportunities with New Orleans International Airport ▪ Capitalize on expansions of the Port of New Orleans, Millennium Port, and waterways in Jefferson Parish ▪ Provide leadership in the development of a regional workforce system ▪ Improve the region's transportation infrastructure capacity <p>Land Development Objectives:</p> <ul style="list-style-type: none"> ▪ Develop a Jefferson Parish land use master plan ▪ Promote redevelopment of blighted and underutilized properties

Table 3.1. Summary of Current Local Planning Efforts (Continued)

Jurisdiction	Study or Plan	Area	Highlights Applicable to Transit-Oriented Development Policies
New Orleans	<p>Adoption of The New Century New Orleans Master Policy Plan (NCNO) in 1992 and The Blueprint for New Orleans Master Plan (The Blueprint) adopted in 1998.</p> <p>The Blueprint identified fourteen Master Plan Elements:</p> <ul style="list-style-type: none"> ▪ Visions, Goals and Policies (adopted 1992) ▪ Land Use (adopted 1999) ▪ Parks, Recreation and Open Space (adopted 2002) ▪ Economic Development (adopted 2002) ▪ Arts and Cultural Management (adopted 2002) ▪ Tourism Management (adopted 2002) ▪ Historic Preservation (adopted 2002) ▪ Transportation (adopted 2004) ▪ Housing ▪ Community Facilities and Infrastructure ▪ Natural Hazards, Critical and Sensitive Areas ▪ Energy ▪ Environmental Quality ▪ Human Services 	Parish-wide	<p>This plan describes existing land use conditions as well as predictions for future land use for thirteen designated planning districts throughout the City. While it does not make recommendations with regards to specific parcels or areas, the areas in which the stations are located are designated as mixed use. This is a hybrid land use category that encourages a flexible mix of residential, commercial and certain light industrial uses. The plan does not give any specific density requirements.</p> <p>NCNO identifies five Core Goals:</p> <ol style="list-style-type: none"> 1. Vital, Distinctive Neighborhoods 2. Well Manage Physical and Economic Growth 3. Efficient, Responsive Basic Services 4. A Healthy Natural and Built Environment 5. Expanded Arts, Recreational and Cultural Opportunities <p>Transportation Goals and policy directives:</p> <ol style="list-style-type: none"> 1. Preservation of the existing transportation system and the logical completion of existing projects while providing for some additional capacity. 2. Creation of a balanced transportation system by producing a wide range of transportation choices. 3. Public safety enhancements through signalization and other operational improvements. 4. Integration of land use and economic development with transportation planning. 5. Increased public role in the transportation planning process. <p>Key Issues of Regional Importance: Regional Cooperation, Airport Improvements/Expansion, Expansion of Port Operations, Coordination of Rail Freight, Interstates and Highways Capacity, Bridge Capacities, Public Transit System Improvements, Hurricane and Emergency Planning, Funding Sources.</p> <p>Issues of Citywide Importance: Existing Street Conditions, Land Use and Traffic Management, Heavy Truck Routes, Parking and Curb Side Use, Bicycle and Pedestrian Safety, Planning for Seniors and People with Disabilities, Signalization and Public Safety, City Management and Operations, and Funding Sources.</p> <p>Summary of Transportation Needs:</p> <ul style="list-style-type: none"> ▪ Aging Transportation Infrastructure ▪ A population highly dependent on public transit ▪ New Orleans as a fully developed, mature urban environment ▪ The largest concentration of jobs in the CBD, supporting tourism and the Port of New Orleans ▪ Complex institutional and regulatory environment responsible for planning, administration and operations of the transportation system of the city ▪ Inadequacy of funding <p>Key Recommendations of the Transportation Plan:</p> <ol style="list-style-type: none"> 1. Construct terminal expansions and runway additions to the Louis Armstrong New Orleans International Airport. 2. Expand terminal the public transit system with integrated commuter rail, light rail, streetcar lines and select bus components. 3. Complete I-10 and I-610 corridor improvements and further design related upgrades. 4. Improve conditions of major evacuation routes with underpasses to ensure that routes are open and flood proof. 5. Support development of tourism facilities and cruise ship terminal expansion. 6. Pursue new stable sources of funding including consideration of a regional gasoline tax. 7. Maximize completion of street improvement projects by increasing funding and staffing of the Department of Public Works and by pursuing all federal and state funding sources. 8. Develop a Transportation Plan for Downtown New Orleans to include visitor center, transfer and parking facilities, information centers, shuttle and transit services as well as bicycle and pedestrian improvements. 9. Develop a circulation and access plan for the Central Riverfront area (Convention Center / Port of New Orleans), which addresses needs of multiple users. 10. Integrate bicycle and pedestrian infrastructure into the Capital Improvement budget for designated street corridors and exclusive bicycle/pedestrian facilities in accordance with the Louisiana Statewide Bicycle and Pedestrian Master Plan. 11. Install new systems and utilize new technologies to improve signalization, public safety and the overall transportation management system.

Table 3.1. Summary of Current Local Planning Efforts (Continued)

Jurisdiction	Study or Plan	Area	Highlights Applicable to Transit-Oriented Development Policies
Jefferson Parish	<p>Envision Jefferson 2020 Land Use Plan (Adopted as Article 6 of Chapter 25, Planning and Development, March 2004)</p> <p>Adopted Elements:</p> <ul style="list-style-type: none"> ▪ Land Use ▪ Transportation ▪ Implementation <p>Elements Underway:</p> <ul style="list-style-type: none"> ▪ Housing ▪ Economic Development <p>Other Major Implementation Tasks Underway:</p> <ul style="list-style-type: none"> ▪ Bucktown Neighborhood sub-area Plan ▪ Revisions of Subdivision Regulations/Development of Unified Code Structure ▪ Thoroughfare Plan <p>Future Elements:</p> <ul style="list-style-type: none"> ▪ Public Works ▪ Community Design ▪ Parks & Recreation 	Parish-wide	<p>This plan provides a detailed description of existing land use conditions as well as future land use predictions for the Parish. It does not include parcel specific recommendations for development. The plan designates areas within a ¼ mile of the three (3) stations along the light rail corridor as Community Mixed Use (CMU). This category includes medium density uses such as office, commercial, residential, recreation lands and mixed-use centers. The CMU category will accommodate a land use mix containing residential with transit stops and stations, commercial, public, recreation and office uses. The minimum permitted residential density is eight (8) dwelling units per acre with a maximum permitted residential density of twenty (20) dwelling units per acres for within a ¼ mile of a light rail transit station.</p> <p>Land Use Concepts:</p> <ul style="list-style-type: none"> ▪ Expedite critical transportation improvements (see below) ▪ Recognize that additional demands may surface as a result of future ▪ New planned developments centered on the TPC golf course. ▪ Mixed-use development that will provide better access to goods and services for residents, particularly our aging seniors ▪ Light-rail service and transit-oriented development that will provide an alternative to traffic congestion and an economic engine for Airline Drive Corridor revitalization ▪ A new business and technology park ▪ Expanded opportunities for industrial growth <p>Transportation Element:</p> <p>Goal 1: Resolve transportation network challenges through partnerships between government, business and citizens.</p> <p>Goal 2: Provide an interconnected network of streets, walkways, bicycle paths, public transportation and light rail that provides a variety of options for movement through the Parish and metropolitan area.</p> <p>Goal 3: Maintain a safe, efficient, cost-effective, environmentally sound, and visually pleasing transportation system.</p> <p>Goal 4: Enhance the competitive position of the Parish and provide for the movement of goods and employees by taking full advantage of opportunities that support, expand and improve transportation system components (highway, rail, transit, air and water).</p> <p>Regional Transportation Projects:</p> <ul style="list-style-type: none"> ▪ Huey P. Long Project ▪ I-49 Extension ▪ East-West Corridor (highway and transit improvement) ▪ Louis Armstrong International Airport <p>Key Implementation Tools:</p> <ul style="list-style-type: none"> ▪ Area and Facility Plans ▪ Development Regulations ▪ Capital Budget and Capital Improvement Plans (CIP) ▪ Inter-governmental Agreements
Jefferson Parish	Airline Drive Zoning Study	Properties along Airline Drive from Kenner line to Parish line	<p>This study examined the zoning, land use and design features of the properties along Airline Drive. It recommended that an overlay district be created in an effort to encourage beautification along the corridor.</p>

Table 3.1. Summary of Current Local Planning Efforts (continued)

Jurisdiction	Study or Plan	Area	Highlights Applicable to Transit-Oriented Development Policies
City of Kenner	Pattern for Progress – Land Use Plan – Transportation Plan	Citywide	This plan is presently underway and has not been made available to the public yet. From May 2000 through July 2003 the following was accomplished: <ul style="list-style-type: none"> ▪ Detailed land use survey of 35,000 parcels using new APA land based classification standards ▪ Educational presentations to various groups throughout Kenner, including a community image survey ▪ Progress on landscaping and transportation elements ▪ Public meetings
New Orleans	New Orleans Union Passenger Terminal Multi-Modal Transportation Center, RTA. January 1996	CBD	This Environmental Assessment (EA) recommends the redevelopment of the UPT into a regional multi-modal facility and mixed-use development. Although a light rail system is briefly discussed, there is no specific mention of establishing a light rail station at the UPT.

3.2 RESOURCES FOR UPDATING PLANS

The preceding discussions concerning the governmental and non-governmental organizations, is neither a comprehensive summary nor a critique of the status of local plans, relative to policies for TOD. However, these brief reviews indicate that many planning efforts and contributors can be aligned to meet the needs of the airport to downtown transit project, to advance the development toolkit necessary to support TOD.

A framework for updating these local plans is provided in this report. Selected information is presented as a beginning basis for action, including:

Appendix A – provides a comprehensive annotated summary prepared for this report, highlighting **TCRP Report 102, Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects**. This study, both in the summary format in Appendix A, and in direct reference online to the detailed original report, is a wealth of information describing the “lessons learned” from across the United States in the application of TOD. Not all of these lessons will apply to the New Orleans region. However, the experiences gained elsewhere, can contribute to a customized approach in the airport to downtown corridor, or in other corridors in the New Orleans region.

Appendix B – provides a summary of the legal aspects and experience in land use policies concerning applications of TOD. Also this paper establishes the “Elements of TOD” used to regulate and support development in transit corridors, and to develop procedures for implementing transit-supportive land use policies.

Appendices C and D– are summaries and illustrations of recent LRT projects and TOD. The best way to understand the progress and challenges of these projects is to contact officials in these other cities and meet and discuss with them issues concerning the reality of transit development, and the details of TOD policies. Contacts and links to additional information are provided.

Appendix E – is a summary of a specific economic assessment prepared as part of this report and the Phase-3 contract with the RPC. This assessment is focused on three (3) station districts, one in each jurisdiction along the airport to downtown corridor. The detailed summaries provide the following: 1) an economic projection of the potential for TOD in the corridor and for representative station districts; 2) an example of the type of economic assessments that must be further developed in support of a transit corridor and transit-supportive development plans. As suggested earlier in the Phase-2 report, there is a

need for a comprehensive corridor development plan to support the airport to downtown project.

Appendix F – provides information prepared in the Phase-2 report and at workshop meetings. This information presents the concept plans for TOD for the three station districts for which the economic assessments (presented in Appendix E) are based. Again, these are considered very preliminary and only a starting point for a more rigorous planning effort with direct involvement by local planning officials, citizens and developers.

The current East-West Corridor AA/DEIS study scheduled for completion in late 2005 also provides a wealth of information including extensive community workshop summaries. Information and community input from this study may result in a recommended project and implementation strategy.

3.3 A FRAMEWORK FOR UPDATING PLANS

If the LRT project is advanced as a priority for implementation, the opportunity for TOD in the airport to downtown corridor along Airline Drive is excellent. The scope and scale of TOD must be supportive to the transit system and an investment commitment by public stakeholders. Success will be interdependent on a number of factors:

- Political leadership among the key stakeholders
- Involvement and ongoing public input in TOD planning, design and implementation steps
- Institutional coordination and governmental streamlining of support to project delivery
- A shared vision of the corridor and goals of revitalization in the context of the region as a whole and in consideration of each community directly impacted
- Engaging developers into direct participation in the project investment and shared responsibility in designing quality environments
- Station-area district plans that integrate into community-wide plans

Figure 3.1 illustrates a recommended framework for developing TOD in conjunction with transit development in the New Orleans region, and specifically for the airport to downtown corridor. The framework identifies in order of priority, the steps necessary to establish, define and adopt a TOD program. Strategic investment by the local governments in time and resources will require strong commitment among the stakeholders for each of these recommended steps

The first step is to establish special zoning. Revisions to local plans and zoning ordinances must specifically address 1) distance from transit stations, 2) density and use regulations, 3) bulk, setback and area controls, 4) station area urban form, and 5) street patterns and parking restrictions. Best practice guidelines are available to assist local planning officials in working with their political leadership and communities, to establish appropriate revisions to existing land use and zoning policies.

An LRT system provides a significant social benefit to the community at-large, not just to the riding public who use it regularly. Policy decisions made by the operating agency and implementing stakeholders, can expand such benefits throughout the adjacent communities. However, this will only be accomplished through coordinated supportive land use policies and controls that limit the direct impact on existing neighborhoods; and, at the same time maximize opportunities for revitalization and planned growth in land uses and amenities which contribute to sustainable communities.

The next step in development of TOD in the New Orleans region and for the airport to downtown corridor is the definition of ancillary techniques or policies for working with developers, government agencies and communities. These ancillary techniques are considered a “policy toolkit” for identifying and controlling the project opportunities and their integration into surrounding communities. The toolkit includes but is not limited to the following: 1) urban growth boundaries and Tier Systems, 2) joint development 3) concurrency regulations, and 4) Transfer of Development Rights. Each of these may have applicability to the airport to downtown corridor and throughout the New Orleans region in support of other transit projects.

For development to occur under TOD regulations in the New Orleans region, development at the periphery of transportation corridors must be controlled as well. Regional urban form concepts include urban growth boundaries (UGB), centers and nodes, and corridors. A UGB is a mapped line that separates urbanized land from rural land and within which urban growth is contained for a specified time period. The tier system divides the community into “growth” and “limited growth” categories and adds the tiers as subdivisions of those general categories.

Joint development strategies can encourage private sector development that is integrated with a transit station or other transit facility. Joint development approaches typically include techniques that capitalize on real property assets that are acquired in the course of transit system development. Examples include those involving property taxes or assessments and excess land acquisitions such as land and air rights leasing, negotiated private-sector investments in property and transit

station capital costs, connection fees for direction tie-ins to transit stations, and concessions at transit stations.

Concurrency regulations tie the issuance of development permits, such as rezonings, planned unit development permits, to level of service (LOS) standards identified in a comprehensive plan. Transportation concurrency management areas (TCMAs) are a framework for using concurrency management in a manner conducive to mass transit, economic development, and a desirable urban form.

The transit agency can use Transfer of Development Rights (TDRs) to encourage transit-supportive development by working with general-purpose local governments to design transit station districts as receiving areas and encouraging development restrictions in peripheral areas.

The third step in the recommended framework for TOD policies in the New Orleans region is to adopt program elements. The program elements identified for the airport to downtown corridor include but are not limited to the following: 1) Specific Plan, 2) Planned Unit Development, 3) Development Agreements, and 4) Capital Improvement Program.

A Specific Plan would be developed for each station district. It would follow the more general corridor development plan strategy to be prepared by a project development team, in concert with the local planning officials and communities within the corridor. The Specific Plan would detail the zoning reforms, like mixed-use overlays and density bonuses to be introduced in each district to leverage TOD. It would also detail the land use and implementation objectives for growth within the station district and contiguous areas.

A PUD allows a local government to control the development of individual tracts of land by specifying the permissible form of development in accordance with the local PUD ordinances. Because PUD zoning allows greater flexibility than traditional zoning, greater emphasis is given to site planning than in single-use districts. Minimum and maximum densities are often included as part of a planned unit development (PUD) approval or development agreement.

A TOD program can operate in part through a series of development agreements between the transit agency and local jurisdictions, and utilization of development agreements with private developers. Often the primary use of TOD funding by local governments is site acquisition.

Under a development agreement the local government agrees to “freeze” the regulations applicable to a particular property, often in consideration for substantial contributions by the landowners to public infrastructure,

environmental mitigation, or affordable housing. A number of states now expressly authorize development agreements by statute.

The Capital Improvement Program is the local funding mechanism for establishing funding for TOD projects within each jurisdiction and region-wide.

Many elements of the recommended priorities for TOD in the New Orleans region for the airport to downtown corridor are already part of the current planning practices. Table 3.2 is a partial summary of identified applications of TOD supportive policies.

In summary, this section has presented information on current and recommended priorities to support transit and TOD in the New Orleans region. Examples of how these policies are already successfully in use points positively toward further action in the future.

Figure 3.1 – Policy Framework for New Orleans Region

**FRAMEWORK FOR NEW ORLEANS REGION
TRANSIT-ORIENTED DEVELOPMENT POLICIES**

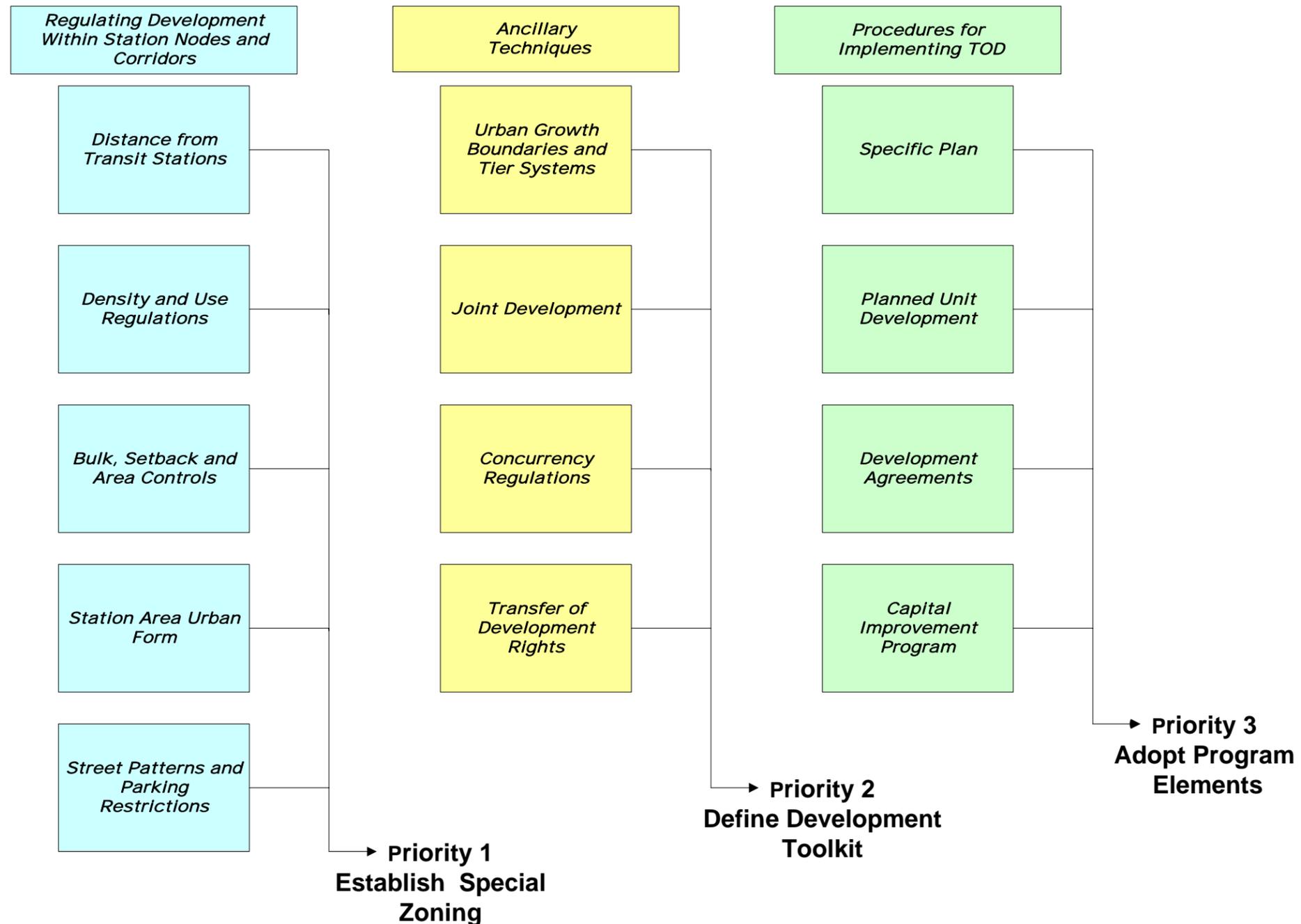


Table 3.2 - Application of Transit-Oriented Development Policies in the New Orleans Region

Jurisdiction/Agency	Policies or Regulations (Existing or Proposed*)	Current Examples/Potential Applications	TOD Element
Orleans Parish – Mayor’s Office of Economic Development	<ul style="list-style-type: none"> • New Markets Tax Credit Program • Restoration Tax Abatement Program • Renewal Community Tax Benefits • HUD Section 108 Guaranteed Loan Program • Neighborhood Commercial Revitalization Fund • Enterprise Zone Program 	<ul style="list-style-type: none"> • Various CBD building renovations • Earhart Corridor • Jazzland/Six Flags New Orleans • Freret Street • Tulane Avenue/Earhart Boulevard Corridor 	<ul style="list-style-type: none"> • Joint Development
Orleans Parish – City Planning Commission	<ul style="list-style-type: none"> • Urban Corridor Overlay Districts • Districts from proposed CZO: Urban Mixed-Use District*, Neighborhood Service District*, Regional Commercial District*, Neighborhood Commercial District* • Neighborhood Area Studies • Big Box Regulations • Conditional Use Provisions • Subdivision Regulations • Traffic Impact Analysis • Map/Zoning changes with title restrictions 	<ul style="list-style-type: none"> • Carrollton Avenue; Bullard Avenue; General DeGaulle Boulevard • Canal Street; Carrollton Avenue; Tulane Avenue • Mid-City Neighborhood Plan; Xavier University expansion plans • St. Thomas area redevelopment; Saulet Apartments • Proposed Central City Albertson’s grocery store; Ritz Carlton hotel • Earhart Boulevard corridor improvements • Howard Avenue Extension • Canal Street/Carrollton Avenue streetcar 	<ul style="list-style-type: none"> • Station Area Urban Form • Bulk, Setback and Area Controls; • Specific Plan • Street Pattern and Parking Restrictions • Concurrency Regulations • Planned Unit Development • Capitol Improvements Program
Orleans Parish – Mayor’s Office of Environmental Affairs	<ul style="list-style-type: none"> • Brownfields Redevelopment Program 	<ul style="list-style-type: none"> • Venus Garden Apartments; American Can Company; Albertson’s grocery store – Tulane Avenue; Whole Foods grocery store – Magazine Street 	<ul style="list-style-type: none"> • Specific Plan • Joint Development
Jefferson Parish – Jefferson Economic Development Corporation (JEDCO)	<ul style="list-style-type: none"> • Restoration Tax Abatement Program • Industrial Tax Exemption Program • Renewal Community Program 	<ul style="list-style-type: none"> • Business and Industrial Parks – Elmwood & Labarre • Research and Technology Park • South New Orleans Subdivision (Harvey) • Westbank Golf Course (near Bayou Segnette) • Harvey Canal Industrial Area 	<ul style="list-style-type: none"> • Joint Development • Title Restrictions • Planned Unit Development
Jefferson Parish – Planning Department	<ul style="list-style-type: none"> • Commercial Parkway Overlay District • Zoning district regulations 	<ul style="list-style-type: none"> • Airline Drive beautification efforts • East-West Corridor improvements 	<ul style="list-style-type: none"> • Station Area Urban Form • Capital Improvements Program
Jefferson Parish – Environmental and Development Control	<ul style="list-style-type: none"> • Brownfields Redevelopment Program 	<ul style="list-style-type: none"> • Former JeT bus barn (David Drive @ Airline Drive) 	<ul style="list-style-type: none"> • Specific Plan • Joint Development
City of Kenner	<ul style="list-style-type: none"> • Brownfields Redevelopment Program • Special zoning district regulations 	<ul style="list-style-type: none"> • Stephen Barbre Elementary School; Old Treatment Plant • Rivertown • Esplanade Mall • Louis Armstrong New Orleans International Airport 	<ul style="list-style-type: none"> • Specific Plan • Joint Development • Planned Unit Development • Station Area Urban Form



Section 4 – Concepts, Guidelines and Policies Supporting TOD

This section presents further description of concepts, guidelines and policies supporting TOD in the New Orleans region, and the airport to downtown LRT project. Some of this information was previously presented in the Phase-2 report.

This and all of the information presented in this report should be considered a starting point for which to customize the best approach for the New Orleans region.

4.1 TRANSIT STATION CONCEPTS

Future stations for the planned airport to downtown LRT project will establish new centers of activity in the corridor. These stations are the beginning focus for the planning and design for urban revitalization and the successful integration of the station areas into adjacent communities.

A number of issues influence effective station site design, such as site size, development considerations, parking, access modes, non-driver access, signage, landscaping, and lighting. These issues, along with applicable municipal and parish design standards and regulations, should guide station site design.

During the Phase-2 study, station concepts were developed for all potential stations under study in the AA/DEIS study. These station concepts developed are considered very preliminary.

In the future, the concepts and design guidelines presented in the following sections are important considerations. Applying these and other local concepts will allow station design to be achieved that is the centerpiece of successful TOD for station districts and the communities along the LRT corridor.

4.1.1 Site Size

The size of a given LRT station is determined by the functional requirements for its use. Terminal and regional/intermodal stations act as nodes of modal interface, with intensive usage by buses, carpooling vans, taxicabs, and personal vehicles. Since the majority of patrons using these stations will access or egress the site via some form of vehicle, these sites can require significant land.

Pedestrians and bicyclists, on the other hand, will typically use local/neighborhood stations. Therefore, these station sites will be much smaller, often occupying little more than the footprint of the station structures.

4.1.2 Development Considerations

Terminal and regional/intermodal stations form significant nodes of community activity, serve as catalysts for adjacent development, and often initiate a revitalization of their environs. As such, site design must consider the potential for joint development of the transit-agency-owned property, possibly in the form of a public-private partnership. Since vehicular and pedestrian activities are usually accommodated at the ground level, air rights developments above the station site could be added later. Such developments could provide recurring revenue to the transit agency through the long term leasing of their air rights.

4.1.3 Parking Considerations

Terminal and regional/intermodal stations often require adjacent land to accommodate the numerous intermodal transfer and storage functions. Some of these stations accommodate hundreds of long-term parking spaces and thus require careful design to achieve a successful fit into their neighborhoods and the urban/suburban fabric of the region. The design must follow the applicable municipal/parish standards and regulations governing the design and construction of parking areas. (Such standards generally include minimum parking space sizes, vehicular and pedestrian circulation requirements, landscaping, screening, and perimeter buffering guidelines, and provisions for the mobility-impaired.)

Local/neighborhood stations do not usually have additional site areas. The pedestrian access and egress space requirements are minimal. The curbside drop-off/pick-up from buses, carpooling vans, taxis, and private

vehicles can often be accommodated in the public right-of-way, which obviates the need for additional land acquisition at these stations.

4.1.4 Safety

The safety and efficiency of vehicular and pedestrian circulation within the terminal and regional/intermodal station sites is of paramount importance. These factors are key to making the sites user-friendly and, in turn, attracting patronage to the system. The curbside drop-off/pick-up points at local/neighborhood stations must also be designed to maintain safe operations along public thoroughfares.



Transit Patron Parking Considerations (Dubai, United Arab Emirates)



Transit Station Landscaping Considerations (Southern New Jersey Light Rail Transit)



Transit Patron Accommodations Concept

4.1.5 Access Mode Priorities and Accommodations

Access mode priorities for each station are based on the station type and modes accommodated. The accepted practice in transit site planning is to establish a hierarchy for the modes of access.

The highest priority is to provide for feeder buses in order to promote the use of feeder buses as a means of accessing the stations. Providing bus stalls, as close to the station entrances as possible does this.

The second priority is to provide for drop-off patrons. This group consists of patrons driven to/from the station and dropped-off/picked-up near the station entrances. From a design standpoint, this requires only short-term parking spaces on the station site. These spaces will be further away from the entrances than the bus sites, and thus will require a little longer walking time.

The third priority is to provide for park-and-ride patrons. Park-and-ride patrons require space in which to park a car for an extended period of time. They will have the farthest walk to the station entrances, although shorter than the walking requirements at large commercial malls. While park-and-ride facilities require the most space per patron, they have proven to be an essential ingredient in transit rider accommodation.

In some cases, parking structures may be necessary to provide an adequate amount of park-and-ride spaces. The design of these structures will vary based on site constraints and the number of parking spaces to

be accommodated. Parking garages must be designed to minimize their impact on the ground level circulation of vehicles, pedestrians, and the surrounding community. Successful parking facilities at transit stations are integrated into mixed-use facilities, which offer transit patrons additional conveniences and present a more architecturally appropriate image to the community. Such mixed-use facilities can result from public-private partnerships that exploit joint development opportunities.

4.1.6 Accommodations for Non-Drivers

Patrons who walk or bicycle to the stations must be accommodated in a safe and inviting manner. These individuals are the transit system’s most environmentally responsible patrons and require the least from the station site in terms of paved surfaces and land area. The station walkway design must be safe and non-circuitous, provide connectivity to the existing community pedestrian network, and accommodate the needs of the mobility-impaired. The design should minimize conflicting movement patterns between pedestrians/bicyclists and motorized vehicles circulating within the station sites.

4.1.7 Directional and Informational Signage

The ease of use of a station depends on the appropriate placement and design of graphic signage throughout the site and at the entrances/exits. Decision points should be properly signed, particularly those that indicate the vehicular entry and exit points to/from the adjacent roadways. Transit patrons rely heavily on the directional and informational graphic signage, within each station site and throughout the transit system, to consistently guide and reinforce their movement patterns.

4.1.8 Landscaping

In addition to aesthetically enhancing the sites, landscaping is used to reinforce movement patterns, prevent conflicting circulation (vehicular and pedestrian), and emphasize view corridors for functional purposes. Landscaping design can aid scale transitions from the larger architectural elements of the station and trackway structures. Well-designed landscaping is key to achieving a successful fit of a station into its neighborhood.

4.1.9 Site Lighting Design

Lighting is critical to the safe and secure use of a transit station, as well as to the perception of it being a non-dangerous and inviting place. Lighting should be designed to guide and assist the safe movement of both vehicular and pedestrian traffic throughout the station site. It should enhance the aesthetic quality of the station facilities and landscape

materials while minimizing the impact of light on the surrounding community. Design factors such as the use of appropriate lighting intensities, cut-off angles to prevent light intrusion, and proper screening



Transit Station Lighting Design Concept

should be carefully considered.

4.2 STATION DESIGN GUIDELINES

Aesthetic, functional, and operational issues all influence effective station design. The design should insure that transit patrons are provided a consistent experience, with an appropriate level of safety, space provision, ancillary facilities, and positive ambience throughout the system. Appropriate design criteria will enable achievement of these objectives in a cost-effective manner, while including planned capacity for future growth.

4.2.1 Aesthetic Objectives

A system-wide approach is essential to establish standardized design configurations, material usage, and assemblies for all of the stations, which will create an aesthetically unified transit system. The transit system and its stations should be perceived as a series of like components, designed as a totality, not as a disparate collection of dissimilar elements. The successful fit of the stations into their

environment is another important aesthetic objective. Effectual aesthetic strategies will lessen or preclude their intrusive visual impact. The architectural design should be simple, with clarity of line that will not compete visually with adjacent, more architecturally significant buildings.

Repetition of station functional relationships and elements should enhance the operative clarity of all stations, producing similar experiential patterns for patrons throughout system. Such functional patterns, when coupled with visual, spatial and aesthetic continuities, will aid newcomers, the elderly, and mobility-impaired individuals as well as everyday patrons. These similar functional relationships and aesthetic commonalities will help transit patrons avoid confusion, maintain a clear concept of self-in-place, and use the system in greater comfort, security, and safety.

4.2.2 Basic Station Design Considerations

The basic principles in laying out station facilities include space planning guidelines for both the public and non-public areas (i.e., equipment space and operating staff space), as well as guidelines for emergency evacuation. The following basic station space-planning principles should be utilized:

- Avoidance of congestion, enabling a free flow of transit patrons
- Maintenance of reasonable levels of comfort in the station waiting areas
- Establishment of right-hand orientation for movement patterns
- Capacity to absorb surges in demand and greater densities of patrons due to train service disruption.

In principle, the economic optimum point should determine the allocation of space provided for patrons within transit stations.

4.2.3 Station Concourse Design Considerations

The station concourse level is a combination queuing area and pedestrian thoroughfare, providing patrons with the opportunity, time, and space to orient them without obstructing other pedestrians. The concourse is often a walkway level within a station whose trackage is either elevated or below ground, with access by stairway, escalator, and/or elevator. Three basic concourse design issues are orientation time, decision time, and queuing time.

One key function of the station concourse is to provide space for the sale and collection of transit fares. Approaches to this issue range from automated and manned ticket sales facilities, to fare collection machines through which passengers must pass after inserting their tickets, to proof of payment scenarios without collection devices. The line of demarcation



Transit Station Detail Elements Concept

past which all patrons must be able to show proof of payment (i.e., the paid vs. unpaid zone) is established at the concourse level.

Station control facilities are also located at the concourse level. In some cases, these facilities include a staff office for operational personnel. Depending upon the number of patrons using a given station, these offices may be manned throughout the operational cycle, or only during the peak hours. At stations with low levels of patronage, the control functions may be accomplished remotely via closed circuit television and patron assistance telephones.

4.2.4 Station Platform Design Considerations

Transit patron's board or alight from trains at the platform level, as well as wait for the next train to arrive. Numerous factors influence platform design, including operational considerations, capital cost, feasibility of construction, site-specific access constraints, and the safe and efficient movement of transit patrons.

The sizing of station platforms is one of the most important aspects of successful station design. They should be designed to promote convenient access, egress, and circulation. The arrangement of the stairways, escalators, and elevators should distribute and collect patrons evenly and minimize conflict between boarding and alighting patrons. Although the length of each platform is generally based on the train

length plus some minimum “overrun” distance, the optimum platform width is a critical design parameter. In fact, the width has a more direct and immediate effect on platform crowding than does the length. Platform width is based on the projected patronage and operational considerations.

Proper sight lines along and across the platforms are key to their safe and effective functioning - all patrons must be able to easily see the arrival and departure of trains. Construction of elements that interrupt sight lines (e.g. signs, kiosks, other structures) along platforms must be kept to a minimum. The design of the platform edge is critically important to the ease of train access/egress and to patron safety. Level and adjacent access from the platform to the trains should be designed into all stations. A standardized platform edge design specifying the width, material, color, and tactile requirements should be used for all stations.

4.2.5 Horizontal and Vertical Circulation Guidelines

Successful station design arrangements minimize the extent of horizontal and vertical patron movements. Horizontal movement through stations should be on level surfaces, with a minimum number of level changes. Efficient and safe horizontal movement is aided by an open and spacious design. Long horizontal passageways should be avoided, or be as direct and obvious as possible without heavy reliance on directional signage. The vertical clearance should at least 10 feet, since spaces perceived as compressed impact the capacity of horizontal movement.



Transit Station Signage Considerations (Athens, Greece)

Vertical movement is achieved with ramps, stairways, escalators and elevators. Ramps for the mobility-impaired have been installed retroactively in many older transit systems. In new systems, internal ramps should be avoided, because they hinder movement and are uncomfortable for patrons, particularly the mobility-impaired. However, ramps such as the traditional curb cut may be used to achieve minor changes in level, such as from roadway surfaces to sidewalk levels.

Stairways are the preferred means of achieving vertical level change. They are multi-directional, cost-effective, low maintenance, always available, and efficient patron carriers. For vertical distances of 15 feet or less, stairways should be used instead of escalators. Escalators are the most expensive method of effecting vertical level change. However, they are capable of higher capacities than stairways, and move transit patrons in greater comfort. Escalators are uni-directional; expensive to install, operate, and maintain; require downtime for maintenance; and are uncomfortable to use as stairways when non-operational. They should only be used to achieve vertical transitions in excess of 15 feet. Today, all new U.S. transit systems use elevators between the major station levels, mainly to accommodate disabled patrons. They are multi-directional, meet the travel demands of nearly all patrons, and require far less space than either stairways or escalators. However, they are expensive to install, operate, and maintain; require downtime for maintenance; and are limited in carrying capacity. A successful station design will incorporate the optimum mix of stairways, escalators, and elevators.

4.2.6 Station Space Planning

In addition to a station's public areas, there are numerous spaces that must also be provided to facilitate the operation of the transit system. In general, the terminal and regional/intermodal stations, with their higher patronage volumes, will require more extensive staffing and ancillary support. Such operations-related spaces include ticket offices, station control rooms, administrative offices, and staff restrooms. Ancillary space includes mechanical/electrical rooms, escalator/elevator equipment rooms, switchgear rooms, communications equipment rooms, storage rooms, and others. The sizing and location of each space must be designed based on its functional requirements.

4.2.7 Station Control and Emergency Evacuation

All stations should be equipped with public address systems and closed circuit television (CCTV) monitoring. Each terminal and regional/intermodal station should include a control room, from which announcements are made and the CCTV cameras monitored. Certain station control rooms will also monitor other stations whose size and patronage do not merit the inclusion of such a facility. Help-point

facilities, monitored by the control room staff, should be provided in all stations at both the concourse and platform levels. Patrons can use them to obtain information, summon assistance, and sound an alarm. Such facilities should be located in the same relative positions throughout the system's stations, so that patrons can readily find them.

Proper planning for emergency evacuation is a critical aspect of transit station design. Emergency evacuations require the rapid removal of patrons to a place of safety. Emergency evacuation routes should be along the same paths used during normal station operations, because passage along familiar courses will enable a quicker mass exodus. It is also more cost effective than constructing separate emergency exit routes. Patrons should be able to clear the immediate vicinity of a fire in 4 minutes and reach a place safe from smoke or toxic fumes within 6 minutes. The standard governing fire protection requirements for transit systems is the NFPA 130 Standard for Fixed Guideway Transit Systems, published by the National Fire Protection Association.

4.2.8 Station Signage, Lighting, and Color

Directional and informational signage is an integral part of transit station design. There is a direct correlation between the functional clarity of a station's design and the amount of signage required to assist patron movement. Repetition of station functional elements along with visual, spatial, and aesthetic continuities throughout the system, help patrons avoid disorientation. This allows graphic directional signage to be reduced and used more as reinforcement of patrons having made the correct decision.

Lighting design affects station security and can be used to guide the movement of patrons through the various station areas. Proper lighting is critical to the perception of the stations as safe places, and also enhances the aesthetic quality of the station facilities. Like other elements, station lighting should also be designed on a system-wide basis. The use of color in the stations is also important. Color use refers not only to paint finishes and stains, but also to the natural colors of materials such as granite, marble, ceramic tile, paver stones, stainless steel, concrete, and other design materials. Lighter colors reflect greater levels of light and establish a more comfortable ambience. In contrast, darker colors absorb light and require more energy to achieve minimum lighting levels. Contrasting colors are used to aid patrons, especially those with sight disabilities, and to warn them of potential hazards.

4.2.9 Potential Additional Facilities within Stations

An LRT system provides a significant social benefit to the community at-large, not just to the riding public who use it regularly. Policy decisions

made by the operating agency can expand such benefits by including additional services within the stations. Many transit systems include commercial and retailing facilities at various stations, including automated bank teller machines, tourist information booths, vending machines, and public toilets. These conveniences increase the utility of transit stations and should be given serious consideration during design. Such facilities also generate income on a regular basis, which helps offset the operating costs of the transit system. The design of additional services should ensure that they don't conflict with patron safety, movement, emergency evacuation, clarity of signage, or the overall station ambience.



NOLRT Transit Stations Can Promote a Positive Image to Residents and Visitors

4.3 TOD GUIDELINES

Earlier in Section 1, information is presented describing the definition, benefits, approach, and role of government in support of TOD. In this section specific guidelines are outlined drawn from the experience of urban designers for TOD projects.

One of the best sources of information on TOD is the book by Peter Calthorpe, *The Next American Metropolis, Ecology, Community and the American Dream* (Princeton Architectural Press, 1993). This book has been influential in the evolution of TOD as a practice in planning and urban design across the United States. While other excellent books and publications further advance the state of the practice in TOD, the Calthorpe book remains fundamental as a source of information and ideas. Much of the information, but not all, presented below is drawn from the Calthorpe book.

4.3.1 Transit Service

A TOD represents a mixture of land uses centered on a transit station with a high quality service. Transit service may be provided by light rail (LRT), heavy rail or express bus service, with a minimum of 15-minute frequency of service along a dedicated right-of-way.

A dedicated right-of-way establishes the transit investment as a long-term commitment to both the traveling public and to developers, to encourage supportive investments in property development in the surrounding vicinity to the transit station.

For the airport to downtown LRT project in the New Orleans region, a high quality of service is planned that would meet or exceed the 15-minute frequency of service. Ideally, peak period service should be every 10 minutes to encourage use of the transit service and to minimize delays from feeder bus service.

4.3.2 Mixture of Land Uses

Across the country, a number of definitions are used to define a typology of TODs. The typology provided by Calthorpe designates TODs as either a Neighborhood TOD or Urban TOD.

In a TOD Model Ordinance developed for Huntersville North Carolina, three categories are used: TOD-R (Residentially-Led), TOD-E (Employment-Led), and a Pedestrian Overlay District applicable for transit corridors developed with a continuous development, rather than separated nodes.

Whatever definitions are used for a region’s preference in designating TODs, all should be designed as mixed-use and contain a minimum amount of public, core commercial and residential uses. Calthorpe recommends a “preferred mix” of land uses, by land area with a TOD as presented in Table 4-1 below.

Table 4-1 Mix of Land Uses for TOD, By Type and Percent of Total Area

USE	NEIGHBORHOOD TOD	URBAN TOD
Public	10% - 15%	5% - 15%
Core/Employment	10% - 40%	30% - 70%
Housing	50% - 80%	20% - 60%

The following additional guidelines should be considered:

- The proportion of uses is based on site area, not density or building intensity, and will stimulate pedestrian and economic activity.
- The public use component should include land devoted to parks, plazas, open space and public facilities.
- The different mix of uses for Neighborhood TOD and Urban TOD are intended to reflect variations in intensity and type of development desired at these sites.
- The mix of land uses and appropriate densities should be clarified in a community or site-specific planning process, in order to address site related issues and compatibility with the character of surrounding existing neighborhoods.
- Residential mix of housing densities should vary between 10 and 25 dwelling units per acre, depending on the relationship to surrounding existing neighborhoods.

These guidelines are illustrative for the local governments in the New Orleans region and specifically for the airport to downtown corridor, to begin to stimulate discussions on the details of making TOD successful.

4.3.3 TOD Design Topics

There are a number of design topics that must be considered in the application of TOD in the New Orleans region. Table 4-2, not an exhaustive list, provides a brief summary of key TOD design criteria.

Table 4-2 Design Criteria for Successful Urban TODs

DESIGN TOPIC	CRITERIA
Street and Circulation System	<ul style="list-style-type: none"> • Pedestrian friendly tree-lined with sidewalks • Inter-connected system of streets • On-street parallel parking is encouraged
Site Boundary Definition	<ul style="list-style-type: none"> • To allow for a basic mix of uses, the TOD area should be at minimum of 10 acres for redevelopment and infill sites, and 40 acres for new growth
Office and Retail Intensities	<ul style="list-style-type: none"> • Offices without structured parking recommended for a minimum 0.35 Floor Area Ration (FAR) • Retail recommended for a minimum 0.30 FAR, with surface parking
Building Setbacks	<ul style="list-style-type: none"> • Commercial building are built to sidewalk which should be 15-20 feet wide • Larger setbacks of not more than 20 feet are recommended for multi-story buildings
Building Facades	<ul style="list-style-type: none"> • Building facades should be varied and articulated to provide visual interest to pedestrians. • Street level windows and numerous building entries are required in core commercial areas
Building Entries	<ul style="list-style-type: none"> • Primary ground-floor commercial building entrances may orient to plazas, parks or pedestrian-oriented streets, not to interior blocks or parking lots
Upper Story Uses	<ul style="list-style-type: none"> • Retail developments in the core commercial area may exceed FAR standards by the addition of upper floors of residential and/or office uses

Detailed design criteria is available for residential areas, secondary areas, streets and bikeways, size and frequency of parks, location of plazas, village greens and transit plazas, community buildings, schools and other public facilities, street trees, parking and intersection design. Criteria for these and other design elements of TOD are extensively discussed in the literature cited in this report. Table 4-2 provides some considerations for Neighborhood TODs.

Table 4-2 Design Criteria for Successful Neighborhood TODs

DESIGN TOPIC	CRITERIA
Residential Densities	<ul style="list-style-type: none"> • A minimum of 7 units per net acre and a minimum average of at least 12 units per net acre • Residential densities are measured in net densities on residential land area.
Single-Family	<ul style="list-style-type: none"> • Recommended range from seven to ten units per acre • Townhouses can provide between 18 and 29 units per acre
Apartments	<ul style="list-style-type: none"> • Buildings up to 3 stories can provide densities of 35-50 units per acre
Building Setbacks	<ul style="list-style-type: none"> • Setbacks from public streets should be minimized, while maintaining privacy (between 10 and 15 feet from the property line at the sidewalk) • Minimum and maximum setbacks should be established to reflect desired character of an area
Building Facades	<ul style="list-style-type: none"> • Frequent building entries and windows should face the street. • Front porches, bays and balconies are encouraged
Building Entries	<ul style="list-style-type: none"> • Primary ground floor residential entries to multi-family buildings must orient to streets, not to interior blocks or parking lots • The front-door to single-family homes, duplexes, and townhouses must be visible from the street

For these recommended design topics and others, specific TOD criteria for the planned transit corridor can be determined, through a series of community workshops. Involvement by community representatives, government planners and real estate developers is essential.

These design workshops can provide input to the following:

- Identification of special zoning modifications to the current ordinances for each jurisdiction to incorporate TOD policies
- Visualization of design criteria and TOD policy options
- Public perception and marketing surveys
- Mapping of existing community needs to TOD policies
- Specific plans for station districts

For New Orleans, these workshops in each community must include participation by the key local and regional stakeholders, including the RPC and RTA.

These stakeholders must clearly define the overall form and functional design requirements for the transit corridor project. Success in moving ahead with design plans and transit-supportive policies is best achieved through a strong articulation early in the development process, of the benefits and impact mitigations measures to be assured as part of the project implementation.

4.4 ZONING POLICIES

A successful implementation of TOD for the New Orleans region will require adapting local zoning ordinances, identified as a recommended first priority discussed in Section 3. To accomplish this, applying the lessons learned from other TOD projects across the United States is an important consideration.

4.4.1 Lessons Learned

Based on the review of the information summarized in Appendix A, the following highlights are provided:

- America’s best TOD examples start with a vision and proceed to plan execution through aggressive and inclusive station-area planning, backed by supportive zoning, infrastructure enhancements, and fiscal policies that reward smart-growth

investments. Often, zoning overlays are introduced to allow mixed-use projects to be built, and those project complying with specific station-area plans are promptly issued necessary permits and allowed to build as-of-right.

- The national survey of U.S. transit agencies revealed that, besides standard zoning, the most frequently used tools introduced to leverage TOD are funding for station-area planning and ancillary capital improvements; the introduction of density bonuses, sometimes used to encourage the production of affordable housing units; and relaxation of parking standards.

Some cities have introduced a new transit-mixed use zoning districts. Example features are the following:

- Density – developers may build up to 220 feet in height, with a maximum FAR of five to one for their overall master plan.
- Flexibility – the zone provides a fair amount of latitude in how a project is designed.
- Parking – developers are entitled to a 25% parking reduction vis-à-vis a typical city’s standard of one off-street space per residential bedroom and two spaces per 1,000 square feet of office space.

The core objectives of station-area planning should include the following:

- Reinforcing the public’s investment in light rail by ensuring (via rezoning that only transit-friendly development occurs near stations);
- Recognizing that station areas are special places and the balances of the region is available for traditional development;
- Seizing the opportunity afforded by rail transit to promote TOD as part of a broader growth management strategy;
- Rezoning the influence area around stations to allow transit-supportive uses;
- Focusing public agency investment and planning efforts at stations with the greatest development opportunity;

- Building a broad-based core of support for TOD with elected officials, local government staff, land owners, and neighborhoods; and
- Setting up a self-sustaining framework to promote TOD once the planning is complete.

In some cities implanting agencies have devoted considerable resources to TOD planning along unincorporated portions of the transit corridor. Zoning ordinances were enacted to prevent land uses that are incompatible with TOD and to provide density bonuses.

In some places a unique institutional framework was established that allows the transit agency to take the lead on planning and zoning at transit stations and along transit rights-of-way, with a heavy emphasis on transit joint development and public-private partnerships, and a long history of viewing TOD and joint development as important tools for revitalizing inner-city neighborhoods.

In actuality, implementing TOD it must be recognized that state law grants zoning powers only to local cities and parishes.

Other successful zoning tools to implement TOD include development bonuses, eminent domain, open market purchases, site assembly, TIF, reduced parking standards, and rezoning.

4.4.2 Example Neighborhood TOD Ordinance

This section provides a portion of a draft TOD Ordinance presented as part of a toolkit provided by the Atlanta Regional Commission, at a conference the agency sponsored in 2002¹. This information shows the level of detail and scope of a TOD ordinance.

This example city ordinance is divided into three types of TODs:

1. Residentially –led TOD around a transit station (primarily residential with only service retail and commercial
2. Employment-led TOD around a transit station (primarily commercial with retail and higher density housing); and

3. A Pedestrian Overlay District applicable for transit corridors (especially suited to light rail and local bus routes with continuous development rather than separated nodes).

Excerpts from the Residentially-Led TOD ordinance is inserted and shown in yellow below.

Transit Oriented Development – Residential (TOD-R) Draft Ordinance - Huntersville, NC

Policy Objective

Facilitate the creation of compact pedestrian-oriented neighborhoods within ½ mile of rail rapid transit stations. The neighborhoods would be predominantly residential in nature with compatibly-scaled commercial uses.

Strategies

To establish a new zoning district with the following characteristics:

- Directs concentrations of multi-family and attached housing to transit station areas
- Establishes design standards sufficiently high that residentially-driven transit-oriented-development areas can be properly zoned by public initiative, without benefit of a conditional district zoning plan
- Specifies minimum homes per acre within the 1/4-mile radius and within the 1/2- mile radius of station sites
- Specifies maximum number of parking spaces
- Limits non-residential uses to those known to be transit-supportive

To limit opportunities for new apartments and attached homes in areas distant from transit stations by limiting apartments and attached homes that are beyond the 1/2-mile walking distance from transit stations. Generally, such higher density housing should only be permitted in areas not well served by transit in accordance with other clear growth management strategies, such as Traditional Neighborhood Development (TND), or appropriate infill policies set out in the Comprehensive Plan.

The transit-oriented residential district is established to support higher density residential communities that include a rich mix of retail, restaurant, service, and small employment uses within a pedestrian village format. Land consuming uses, such as large lot housing and large retail outlets are excluded from this district. The TOD-R may be located on developable and redevelopable parcels within the 1/2-mile catchment area of designated rapid transit station sites. The district establishes a primarily residential village within a 10-minute walk of a transit station that serves a residential population of sufficient size to constitute an origin and destination for purposes of rapid transit service.

General Requirements

Along existing streets, new buildings shall respect the general spacing of structures, building mass and scale, and street frontage relationships of existing buildings.

- New buildings that adhere to the scale, massing, volume, spacing, and setback of existing buildings along fronting streets exhibit demonstrable compatibility.
- New buildings that exceed the scale and volume of existing buildings may demonstrate compatibility by varying the massing of buildings to reduce perceived scale and volume. The definition of massing in Article 12 illustrates the application of design techniques to reduce the visual perception of size and integrate larger buildings with pre-existing smaller buildings.

On new streets, allowable building and lot types will establish the development pattern.

A master subdivision sketch plan shall be provided with any application for development approval. It shall comply with the standards of this district and with the most detailed development policies and/or plans adopted by the Town Board for the station’s catchment area. The master plan shall include a topographic survey and shall show the location and hierarchy of streets and public open spaces, location of residential, commercial, and civic building lots, street sections and/or plans, an outline of any additional regulatory intentions, phasing, and any other information, including building elevations, which may be required to evaluate the interior pedestrian environment and conditions at project edges. Phasing of development to provide for future horizontal and vertical intensification to meet the standards of this section is permitted.

¹ Community Choices Toolkit is available at: <http://www.atlantregional.com/communitybuilding>.

A single building on an existing lot shall comply with the standards of this district and with the most detailed development policies and/or plans adopted by the Town Board for the station’s catchment area, but shall require zoning and building permits only.

Development Provisions

- Minimum Development Size: None
- Maximum Development Size: None
- Minimum residential density within 1/2-mile of a transit station should average 12 dwelling units/acre, with higher densities concentrated within the first 1/4-mile of the station and lower densities within the second 1/4-mile.
- Efficiency apartment: 1 parking space per unit or 2 parking spaces per unit
- One bedroom apartment and attached house: 1.25 parking spaces per unit or 2 parking spaces per unit
- Other dwelling units: 1.5 parking spaces per unit or 2 parking spaces per unit
- A maximum of 10,000 square feet of non-residential development shall be permitted for each 250 dwelling units within 1/4-mile of a transit station site. Non-residential square footage may be prorated for larger or smaller residentially developed projects. All non-residential development shall be located within 1000 feet of the station site, and shall be oriented to provide direct and convenient pedestrian access from the transit station.

Design Provisions

Neighborhood Form

- The illustration labeled “More Urban Conditions: Typical Characteristics” (Appendix 2, Streets) shall guide the general arrangement and distribution of elements in the project.
- The area of the project shall be divided into blocks, streets, lots, and open space.

- Similar land uses shall generally front across each street. Dissimilar categories shall generally abut at rear lot lines. Corner lots that front on streets of dissimilar use shall approximate the setback established on each fronting street.

Streets

- Public streets shall provide access to all tracts and lots.
- Streets and alleys shall, wherever practicable, terminate at other streets within the neighborhood and connect to existing and projected streets outside the development. Cul-de-sac shall not exceed 250 feet in length, must be accessed from a street providing internal or external connectivity, shall be permanently terminated by a vehicular turnaround, shall provide pedestrian and bicycle connection(s) through the turnaround to the connected street system, and are permitted only where topography makes a street connection impracticable. In most instances, a “close” or “eyebrow” is preferred to a cul-de-sac. Vehicular turnarounds of various configurations are acceptable so long as emergency access is adequately provided.
- The average perimeter of all blocks should not exceed 1,350 feet. No block face should have a length greater than 500 feet without a dedicated alley or pathway providing through access.
- A continuous network of rear alleys is recommended for all lots; rear alleys shall provide vehicular access to lots 60 feet or less in width.
- Utilities shall run along alleys wherever possible.
- Streets shall be organized according to a hierarchy based on function, size, capacity, and design speed; streets and rights-of-way are therefore expected to differ in dimension. The proposed hierarchy of streets shall be indicated on the submitted sketch plan. Each street type shall be separately detailed. Street types illustrated in Article 5 represent the array of elements that are combined to meet the purposes of neighborhood streets: building placement line, optional utility allocation, sidewalk, planting strip, curb and gutter, optional parallel parking, and travel lane(s). Alternative methods of assembling the required street elements will be considered to allow neighborhood street designs that are most appropriate to setting and use.

- To prevent the buildup of vehicular speed, disperse traffic flow, and create a sense of visual enclosure, long uninterrupted segments of straight streets should be avoided. Methods:

- A street can be interrupted by intersections designed to calm the speed and disperse the flow of traffic (Appendix 2) and terminate vistas with a significant feature (building, park, natural feature);
- A street can be terminated with a public monument, specifically designed building facade, or a gateway to the ensuing space;
- Perceived street length can be reduced by a noticeable street curve where the outside edge of the curve is bounded by buildings or other vertical elements that hugs the curve and deflect the view;

- Other traffic calming configurations are acceptable so long as emergency access is adequately provided.

Buildings and Lots

All lots shall share a frontage line with a street or square; lots fronting a square shall be provided rear alley access.

Consistent build-to lines shall be established along all streets and public space frontages; build-to lines determine the width and ratio of enclosure for each public street or space. A minimum percentage build-out at the build-to line shall be established on the plan along all streets and public square frontages.

Building and lot types shall comply with Appendix 1.

Large-scale, single use facilities (conference spaces, theaters, athletic facilities, for example) shall occur behind or above smaller scale uses of pedestrian orientation. Such facilities may exceed maximum first floor area standards if so sited.

Open Space

Open Space is defined as any area that is not divided into private or civic building lots, streets, rights-of-way, parking, or easements that diminish

the utility or aesthetic quality of the space. Design of urban open space shall comply with Appendix 4.

Parking Lot Landscaping

Parking lot landscaping shall comply with Appendix 3.

District Edge Conditions

Along any boundary of a TOD-R district that abuts a lot with an established single-family detached dwelling, the following two edge conditions shall both apply.

- A minimum 40-foot wide semi-opaque buffer shall be constructed along the common boundary, on the site of the developing use; construction of the buffer is the responsibility of the developing use. Upon written agreement of the owner of the established single-family home, the builder/developer, and the Planning Director, a 6’ masonry wall may be constructed by the developer in lieu of the 40’ buffer, in which case the width of the buffer may be reduced to the width of the wall.
- Free-standing structures or the end units of attached structures on lots along the common boundary (or abutting the required buffer) shall be limited to two stories or 26 feet in height, whichever is less.

Special Uses in TOD-R Districts

Uses permitted in the TOD-R district that exceed maximum first floor area or exceed the maximum limit for non-residential uses are permitted subject to approval of a Special Use Permit.

The Town Board shall issue a Special Use Permit for the subject use(s) and building(s) if, but not unless, the evidence presented at the Special Use Permit hearing establishes each of the following:

- That along any street providing primary pedestrian access to a transit station:
 - Street level building edge(s) shall not exceed one-half of the approved block length, and
 - Distance between pedestrian entries at street level shall not exceed 100 feet, and

- At least twenty percent (20%) of the area of the street level façade shall be composed of windows and doors
- Standards above are met by either the principal building, or by the construction of liner buildings along street level.

- That the proposed buildings and uses shall not substantially increase the demand for automobile access to the transit-oriented development.
- That the proposed buildings and uses meet the Intent statement for the district.

4.5 URBAN ECOLOGY, HABITAT AND REVITALIZATION

For the New Orleans region, the application of TOD policies and transit development must be closely aligned with protection of open space resources, preservation of the natural environment, and compatibility with existing urban neighborhoods.

The Atlanta Conference on Community Choices and toolkit referenced above provides additional resources for both conservation and infill housing development. These resources outline useful goals for redevelopment of under-utilized land in proximity to a transit line:

- Allow flexibility in housing location, type and density within the densities allowed by revised local plans and zoning.
- Provide flexibility in lot size, configuration, and vehicle access to facilitate infill development;
- Provide clear development standards that promote compatibility between new and existing development and promote certainty in the marketplace;
- Encourage development of needed housing in close proximity to employment and services;
- Promote neighborhood preservation and enhancement through redevelopment of blighted distressed, and underutilized properties;
- Provide standards of “historic appropriateness” for redevelopment and alteration of historic buildings;

- Encourage mixed use development to complete neighborhoods and provide housing close to jobs;
- Encourage development and preservation of affordable housing through infill development.
- Provide a residential zoning district that permits flexibility of design in order to promote environmentally sensitive and efficient uses of the land.
- Preserve in perpetuity unique or sensitive natural resources such as groundwater, floodplains, wetlands, streams, steep slopes, woodlands and wildlife habitat.
- Preserve important historic and archaeological sites.
- Permit clustering of houses and structures on less environmentally sensitive soils which will reduce the amount of infrastructure, including paved surfaces and utility easements, necessary for residential development.
- Reduce erosion and sedimentation by minimizing land disturbance and removal of vegetation in residential development.
- Promote interconnected greenways and corridors throughout the community.
- Promote contiguous green space with adjacent jurisdictions.
- Encourage interaction in the community by clustering houses and orienting them closer to the street, providing public gathering places and encouraging use of parks and community facilities as focal points in the neighborhood.
- Encourage street designs that reduce traffic speeds and reliance on main arteries.
- Promote construction of convenient landscaped walking trails and bike paths both within the subdivision and connected to neighboring communities, businesses, and facilities to reduce reliance on automobiles.

- Conserve scenic views and reduce perceived density by maximizing the number of houses with direct access to and views of open space.
- Protect prime agricultural land and preserve farming as an economic activity.





Section 5 - Implementation

This section presents an approach to implementation of TOD policies and plans in the New Orleans Region in support of the proposed airport to downtown Light Rail Transit (NOLRT) project.

While the NOLRT project is focused on building the rail system, this complementary effort is to create a framework to guide development of the station districts along the corridor to achieve transit supportive land use.

The key approach is the adoption of TOD policies, a corridor development plan, and station district plans.

5.1 INCORPORATE TOD POLICIES INTO COMPREHENSIVE PLANS AND ZONING ORDINANCES

As identified in Section 3, the first step is to establish special zoning. This can be accomplished through strategic community and regional planning efforts among the stakeholders and their respective agencies and community organizations.

5.1.1 LOCAL PLAN REVIEW AND CONSISTENCY DETERMINATION

The participation and full cooperation of the relevant planning and regulatory agencies will be needed to efficiently gain necessary development approvals. Project representatives should make presentations to key agencies regularly during this phase. Effectively addressing the various community interests is another sensitive challenge drawing upon experience in community outreach, involvement, and input. The approach to this work can include but is not limited to the following activities:

- A series of workshops to understand TOD policies and to evaluate station district planning concepts prepared as part of current studies
- An assessment of existing plans and zoning compared against TOD policy recommendations
- Identification of plan and zoning modifications and processing of changes through the community and political approval processes

In researching the land use information, all relevant planning documents will be reviewed. These may include district plans, regional plans, and city and Parish plans, as well as transit development plans. There will be a need for close collaboration between the city of New Orleans, Regional Transit Authority, New Orleans Aviation Board, Jefferson Parish, the city of Kenner, and the Regional Planning Commission, and any other

contributing stakeholders, to ensure that proposed TOD policies are advanced within acceptable changes to existing plans, zoning rules and ordinances.

5.1.2 ESTABLISH PLAN AND ZONING MODIFICATIONS

In the drafting TOD policies, consistency to the lessons learned from other communities will be assessed. As presented in Section 4 of this report, example TOD Ordinances from other communities is a starting point for development of a New Orleans regional and local jurisdiction set of plan and zoning modifications.

Revisions to local plans and zoning ordinances must specifically address 1) distance from transit stations, 2) density and use regulations, 3) bulk, setback and area controls, 4) station area urban form, and 5) street patterns and parking restrictions.

In bringing about plan consistency, compatibility with surrounding land uses will be a key consideration. When an existing land use designation must be changed, with the cooperation of other stakeholders, the project representatives will request the necessary zoning amendments be expedited by the planning agencies. The changes may be made through planning instruments such as planned unit development (PUD) or special district designations or parcel-specific variances. The process will involve the submission of conceptual development plans, which will include land use; density (lot coverage, FAR, and setback); access; and phasing.

5.2 CORRIDOR REAL ESTATE DEVELOPMENT PLAN

Another key instrument for TOD implementation will be a corridor real estate development plan, which is described below. This work should be accomplished in parallel to the development of plan and zoning modifications to incorporate TOD policies, as described above.

The overall objectives of the corridor real estate development plan are the following:

- Better assurance of smart growth along the infrastructure and around the station districts as identified in this 3-phase study
- Sustainable development of Brownfield or otherwise left as marginalized areas
- Economic growth due to and generated from commercial development in the corridor
- Value capture of all or part of the increased real estate values generated by the infrastructure project to the benefit of the stakeholders

The Corridor Real Estate Development Plan will establish a blueprint to guide the development of Station District Specific Plans. This will be accomplished by building into the existing technical planning work, a marketing and business basis for that work.

Preparation of a Corridor Real Estate Development Plan may involve the following steps:

1. Economic analysis of the project
2. Market assessment of the plan prepared to date
3. Update of the station district plans to reflect this assessment
4. Plan consistency with local government authorities long-range plans and zoning regulations
5. Revenue analysis of individual project elements
6. A marketing effort to gather intelligence and promote the project
7. Input to the overall project execution plan that addresses planning, design and construction, and identifies roles and responsibilities for key stakeholders.

5.2.1 ECONOMIC ANALYSIS OF TRANSIT-ORIENTED DEVELOPMENT

An economic impact analysis would attempt to answer the following questions about the transit-oriented development proposed as part of the project development. What are the positive impacts of this project in terms of issues that matter to the people of the region, such as jobs, income to the region, access to opportunity, and quality of life? And how do these benefits compare with the costs of the project, including its capital expenditures, and the disruption and inconvenience it might cause as it is being built? An initial inquiry is documented in Appendix E of this report. It now remains to complete this analysis for all station districts and revisions to concept plans for each station district.

5.2.2 MARKET ASSESSMENT

The development and refinement of conceptual plans for TOD at station districts must be subjected to market verification. Assessing market demand is based on a tested approach of quantitative analysis and qualitative inquiry, and the tasks include:

- Collection, survey, and analysis of recent sales of comparable local developments

- Research of regional development trends
- Interviews with local developers, property managers, real estate brokerage firms, and public officials
- Interviews with national investment professionals

For industrial and airport sites, research should be conducted to examine successful developments at comparable development sites around the country to draw lessons and assess the potential for application in the NOLRT corridor. It would also be useful to leverage a national network of related project information to develop parameters for assessing TOD developments.

The results of the market assessment will be used in updating the station district concept plans.

5.2.3 CONCEPT PLAN UPDATE

In parallel and as input to the incorporation of TOD policies into local ordinances, station area concept plans should be refined to take into account the market assessment.

The existing concept plans can be updated and modified based on the findings of the market assessment. The updated market information should be useful in addressing issues of: appropriate mix; intensity and configuration of land use around the station; design of an attractive, active, and secure pedestrian environment; and station design that is a natural extension of surrounding activities and offers convenient, enjoyable, interesting linkages to other transit modes and parking facilities. Primarily, the station and its surrounding district must be "stitched" to the overall fabric of the community.

Because development across different sites and even within individual sites is expected to occur in phases, the updated development plan should include a phasing strategy structured to achieve early success and revenue generation (based on immediate market needs), while promoting sustainable development and property value enhancement for the long term. The plan will also include impact assessments on local and regional land use, traffic patterns, and property values. Infrastructure that needs to be provided by the municipalities will be determined through discussion and review with planning agencies.

Local planning agencies should be engaged to initiate and develop a station area development plan for each station district based on TOD goals and principles, to leverage and maximize the benefits of the infrastructure investment. The plans will set a workable regulatory

framework for future development on available parcels and would guide the evolution of existing development and land use patterns around the station areas.

5.2.4 REVENUE ANALYSIS

An important aspect of the business basis for the corridor real estate development plan is revenue analysis. Such analysis in a project application would contribute to understanding how certain elements of the proposed TOD policies and station district plans can be leveraged in order to secure funding or support. Here are some examples of how such analysis might be used:

- Leasing of the raw land to developers possibly facilitated by the city of New Orleans Economic Development Agency, Downtown Development District (DDD), and Jefferson Economic Development Commission (JEDCO). The rents coming back to the city of New Orleans, Jefferson Parish, the city of Kenner, and the Airport Board, would constitute the revenue streams for the borrowing of construction funds, with any amounts of net rental income not used for debt service flowing through to the owner of the property.
- Establishing tax increment financing districts that would generate leverageable revenue streams by capturing the increased value of the developed land.
- Selling off of the development parcels outright by property owners, applying all or part of the proceeds to construction costs.

Revenue analysis is ultimately a tool for structuring the overall real estate program.

5.2.5 MARKETING STRATEGY

Implementation of the corridor real estate development plan in conjunction with the implementation of the transit project will require the continuing input of market intelligence. Various types of development are envisioned with TOD concepts. Local experience and market knowledge (e.g., residential and small-scale retail and commercial developments) must be utilized. Where planned land uses would benefit from national presence and experience or infrastructure-related market knowledge (e.g., industrial developments and aviation-related support facilities), national partners should be sought.

Project representatives should also prepare a marketing strategy to enhance ridership, including promotions conducted with public entities, such as the Chamber of Commerce and Tourism Board.

5.2.6 INPUT TO PROJECT EXECUTION PLAN

Finally, the corridor development plan must provide input to the broader project execution plan that will be the main tool for managing the overall development of the transit project and related TOD. This is the plan that addresses how design and construction are to be conducted, how they will be controlled through rigorous cost and schedule management, and how various public and private stakeholders will contribute to the effort.

5.3 PREPARE STATION DISTRICT PLANS

Upon completion of the modifications to local plans and zoning and the preparation of a corridor development plan, the next steps to implement TOD in the New Orleans region, and for the proposed airport to downtown corridor, can be accomplished through the preparation of station district plans.

The station district plans can address the second recommended priority in developing TOD in the New Orleans region, to define a development toolkit. This includes the definition of ancillary techniques or policies for working with developers, government agencies and communities. These ancillary techniques are considered a "policy toolkit" for controlling the project opportunities and their integration into surrounding communities.

The station district plan can also address the third recommended priority in implementing TOD, to adopt program elements. The program elements identified for the airport to downtown corridor include but are not limited to the following: 1) Specific Plan (as needed for environmental clearances), 2) Planned Unit Development, 3) Development Agreements, and 4) Capital Improvement Program.

During the precursor activities, the preparation of a corridor development plan and local plan and zoning modifications, local community planners and governmental officials can define the approach and focus for execution of the station district plans.

5.4 IMMEDIATE NEXT STEPS

In overview, the immediate next steps are recommended for the stakeholders to consider for implementing transit-supportive land use and economic development opportunities, as identified in this 3-phase study, in support of a major transit corridor in the New Orleans region:

- Establish a clear need for the proposed transit project through completion of the AA/DEIS studies and project adoption by the regional and local officials.

- Identify major stakeholders and their respective interests, as well as their roles and responsibilities.
- Engage vital development roles in these activities for representatives of the major stakeholders, including but not limited to the RTA, the city of New Orleans Office for Economic Development, the DDD, JEDCO, and the city of Kenner Economic Development Office.
- Coordinate and engage local planning officials (as described above) to amend plans, policies, zoning regulations and incentives that support the transit project and the realization of appropriate-scale TOD in the corridor overall, and specifically around station districts.
- Prepare a corridor development plan (as described above) to advance the opportunities and necessary activities to evaluate the market conditions, refine concept plans, assure consistency with local planning, prepare financial analyses, promote economic development, and initiate a real estate strategy action plan.
- Prepare station district plans (as described above) within each of the political jurisdictions to include community and input and the establishment of implementation tools.
- Establish and maintain key milestones and a path-forward for managing the project and executing engineering and construction contracts.
- Assess and manage public support for the project through public information and coordination with local community organizations.

Appendix A

Transit Cooperative Research Program, TCRP Report 102,
Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects,
Transportation Research Board, National Research Council, January 2004

This report provides a comprehensive assessment of the state of the practice and the benefits of transit-oriented development throughout the United States.

Following is summary of some of the information provided in this report relevant to the development of transit-oriented development in the New Orleans Region. The full report is available at: www.tcrponline.org

1. Transit-Oriented Development: An Overview

- Survey and interviews conducted from July to September 2002.
- The survey process focused on compiling background information and attitudinal responses from all U. S. transit agencies as well as other stakeholder groups in large metropolitan areas where TOD is known to exist in some form.
- Responses from 90 transit agencies (21.6%), 23 from local governments (29.5%), 8 from redevelopment agencies (44.4%) and 24 from MPOs (28.9%).
- Complementing the national surveys were 10 case studies – Boston, New Jersey, the Washing (D. C.) Metropolitan Area, Miami Metro, Chicago, Dallas, Colorado, Portland (Oregon), the San Francisco Bay Area, and Southern California.
- See Table 1.1 - Transit Agency Definitions of TOD, page 6.
- Most frequent reported Transit-Agency “Goals for TOD Projects” includes: increase ridership (20.0%), promote economic development (15.9%), raise revenues (13.3%) and enhance livability (11.1%).

2. The Breadth and Scope of U.S. TOD and Joint Development

- The Survey identified over 100 TODs.
- See Table 2.1 - Existing TODs Identified by Survey Respondents or from Literature Review, Late 2002.
- Distribution of TODs by type of transit service: Heavy Rail (37.4%), Light Rail (31.3%), Commuter Rail (21.8%), Bus (7.8%) and Ferry (1.7%).
- See Table 2.2 - U.S. Rail Joint Development Projects, Transit-Agency Responses
- Most common type of joint development is leasing of ground space and air rights.
- Over 25 rail joint development projects involve the sharing of operation costs (e.g. ventilation systems, utilities, and parking spaces).

- Land uses at TODs include: mixed commercial, mixed-commercial-residential, mixed residential-retail, retail, offices and residential.

3. The TOD Institutional Landscape in the United States

- Public side vested interest in TOD and joint development involving multiple jurisdictions, boards, staffs, budgets and constituents.
- Some large transit properties have set up in-house real-estate departments to negotiate joint development deals and assigned planners to TOD oversight roles.
- MPOs in Portland (OR), Sand Diego and Dallas-Forth Worth regions, have embraced TOD as part of their regional smart-growth strategies, using pass-through federal transportation dollars to promote and leverage transit-supportive development in rail-served communities.
- Two states, California and New Jersey, have undertaken “transit village” initiatives to entice local governments to entice local governments to target new growth along transit corridors.
- Federal direct role in TOD and joint development of land use in transit corridors includes: New Joint Development, Federal Transit Administration (FTA) 1997 reinterpretation of the Federal Common Grant Rule; FTA, New Starts Criteria: FTA Livable Communities program; Location Efficient Mortgage (LEM) programs; Environmental Protection Agency Brownfields Initiative; HUD housing subsidy programs; and, Congestion Management/Air Quality (CMAQ) funding program.
- Cooperative interagency agreements between transit agencies and other entities to promote TOD include: redevelopment agency (17.6%), city governments (35%), county government (26.3%), regional/MPO (26.3%), and state government (17.6%)

4. TOD Implementation Tools

- Step 1 in implementing TOD is to forge a shared vision and prepare a strategic plan.
- To allow for TOD, a municipality can create a special TOD zone or change existing classifications.
- See Table 4.1 - Recommended Residential Density Thresholds for TODs.
- In terms of “mean effectiveness rating” by public sector respondents, the most highly regarded tools are fiscal measures, like capital funding, tax-exempt bonds, and planning funding.
- The most common means of controlling land uses, densities, and site design of TOD is overlay zones.

- For urban TODs, densities of 20 to 30 dwelling units per residential acre and FARs of 1.0 and above are not uncommon.
- The national survey of U.S. transit agencies revealed that, besides standard zoning, the most frequently used tools introduced to leverage TOD are funding for station-area planning and ancillary capital improvements; the introduction of density bonuses, sometimes used to encourage the production of affordable housing units; and relaxation of parking standards.
- In terms of what MPOs, state DOTs and the federal government might do to help implement TODs, respondents from the local levels stated loudly and clearly that what they need most is money --- specifically for strategic station-area planning, infrastructure, and on-the-ground improvements.

5. Building and Bankrolling TOD: A Private-Sector Perspective

- Appendix B provides the protocol used to guide developer interviews. The experiences of those interviewed are discussed in Chapter 5, focusing on the financial, market, and public policy issues that affect developers’ ability and willingness to undertake TOD.
- The presence of supportive land-use designations was rated as the most important factor affecting the decision to develop.
- The second most important factor influencing willingness to develop, as expressed by interviewed developers, is the potential for rent premiums due to superior locations.
- Most developers interviewed also considered proximity to transit an important factor in the decision to develop.
- When asked to rate the overall financial record of TOD, interviewed developers on average scored it as a 5 on a scale of 1 to 7, indicating they think it performs better than most products.
- Developers were optimistic about the prospects of TOD in areas where traffic congestion continues to worsen and there is a pro-TOD political sentiment.
- The largest TODs undertaken by developers surveyed were Lindbergh Station in Atlanta and the Northpoint Project in Boston. Each of these projects covers nearly 50 acres and represents approximately 5 million squarer feet of space in a mix of uses. On the other end of the spectrum, six developers surveyed indicated that their standard projects consist of fewer than 100 residential units.

6. Barriers to TOD: What They Are and How to Overcome Them

- The literature sorts barriers to TOD into three basic categories: 1) fiscal 2) organizational and 3) political.
- Fiscal barriers include factors that detract from the financial feasibility of TOD projects, such as questionable market viability and lack of conventional financing.
- Organizational barriers are structural impediments lodged in the institutional fabric of transit agencies and other governmental entities responsible for projects.
- Political barriers include land-use policies and NIMBY forces that impede multifamily housing and infill development more generally.
- The national survey of public-sector stakeholders shed light on what barriers are perceived to be the most onerous and difficult to overcome. Most problematic, according to survey respondents, are automobile-oriented development patterns.
- The lack of lender and developer interest in TOD, along with limited local expertise in planning for TOD and questionable market demand, are generally seen as significant stumbling blocks.
- Nothing will do more to surmount the obstacles to TOD than success stories, such as in Dallas and other cities.

7. Benefits of TOD

- The literature is replete with platitudes that have been reaped on the TOD concept; however, relatively few serious studies have been carried out that assign benefits to TOD in any quantitative or monetary sense.
- Two benefits for which quantitative impacts have been measured – ridership increases and property value gains are reported (see Chapters 8 and 9).
- Benefits are defined as either redistributive or generative.
- Redistributive impacts involved transfers and accordingly are mainly financial and pecuniary. For example, higher sale-tax receipts from increased retail-sales activities in a TOD community are offset by lower tax receipts from the loss of retail sales (to the TOD) in another community with an automobile-oriented shopping center.
- Generative impacts represent net efficiency gains that stem from improved resource allocations and accordingly economic (versus financial) in nature. For example, reduced traffic congestion and thus travel time savings afforded by TOD is an unmistakable economic benefit.

8. Evidence of Ridership Impacts

- While some critics charge that rail transit investments generally lure bus riders to rail, experience show that TOD can attract significant shares of former motorists. A California study found that among those who drove to work when they lived away from transit, 52.3% switched to transit commuting on moving within a ½-mile walking distance of a rail station.
- On balance, research to date shows that TOD yields an appreciable ridership bonus: well-designed, concentrated, mixed-use development around transit nodes can boost patronage as much as five to six times higher than comparable development away from transit.

9. Real-Estate Market Impacts of TODs

- Research findings on the effects of proximity to transit on land values are not very consistent in part because impacts vary depending on severity of traffic congestion, local real-estate market conditions, swings in business cycles, and other factors.
- Most, although not all, studies of transit’s impacts on residential properties show net benefits.
- Most evidence on commercial property comes from heavy-rail systems, and, as in the case of residential properties, it is not altogether consistent.
- Although theory suggests light-rail systems confer smaller benefits to commercial properties, some researchers have reported otherwise.
- For example, a study of the DART system compared differences in land values of “comparable” retail and office properties near and not near light rail stations. The average percent change in land values from 1994 to 1998 for retail and office properties near DART stations was 37% and 14% respectively; for “control” parcels, the average changes were 7.1% and 3.7% respectively.
- TOD's synergy of proximity, density, mixed uses, and walking-friendliness, under the right conditions, becomes expressed through geometric gains in property values and overall real-estate market performance.
- Some of the land-value premiums associated with being near transit could be due to supportive public policies that are targeted at TODs.

- The existence of land-value premiums provides a potential source of revenue for transit agencies to tap into to help defray capital costs.
- Since the public sector invests taxpayer monies in rail systems, recapturing some of the value-added, one can argue, is equitable from a societal point of view.
- One of the most direct means of recapturing value is through benefit districts. For example, Los Angeles’s MTA obtained 9% of the funds used to pay for the \$1.5 –billion Red Line Subway through special assessments levied against owners of commercial properties in and around subway stations.
- In most cases, a benefit-assessment district can only be formed if the majority of property-owners are often willing to do this to pay for improvements, like sidewalks, that directly abut their properties, getting them to agree to chip in to help finance rail systems or TODs is more difficult.
- The rationale nexus doctrine that courts apply in weighing whether benefits have been conferred by public infrastructure sets a high standard that transit investments cannot always meet.
- In summary, through effective partnerships with transit agencies, local government, and others — and under the right conditions— all parties are in a position to reap the financial gains conferred by well-planned and well-managed TOD.

10. Case Study 1 - TOD in Boston: An Old Story with a New Emphasis

- Boston provides five important lessons for other jurisdictions’ TOD development goals.
- First, a strong market makes many things work.
- Second, a strong public-sector leadership is needed to promote TOD, even in a strong market.
- Third, a significant part of leadership is helping to make project work financially.
- Fourth, transit has proven to be a lynchpin in a more sustainable form of urban regeneration.
- Last, a city must solicit broad-based support before committing to a TOD future.

11.

Case Study 2 – New Jersey’s Transit Villages: From Refurbished Rail Towns to Ferry-Oriented Development

- TOD has a long history in the state of New Jersey, going back to the turn-of-the-century streetcar suburbs and commuter-rail towns.
- Following decades of decline and disinvestments, today a movement is underway to re-energize neighborhoods surrounding longstanding train stations and to create vibrant and attractive transit-oriented communities.
- No single-factor accounts for the resurgence of TODs in New Jersey. Rather, a confluence of market dynamics, local political leadership, supportive state policy, and significant rail-transit service enhancements has sparked recent initiatives.
- New Jersey’s Transit Village Initiative gives priority access to state grants (e.g., for urban renewal and transportation improvements) and provides coordinated technical assistance from 10 different state agencies, with the NJDOT and NJ TRANSIT taking the leadership roles in coordinating efforts among agencies.
- To be a transit village, a local community must demonstrate a firm commitment to transit village principles. First and foremost, station-area planning needs to be well underway, and some expression of private-sector interest needs to be secured.
- The places that have been most successful in turning around neighborhoods bordering train stations have generally been small towns with powerful elected officials and small planning departments.

12. Case Study 3 – Washington, D. C.: Model for the Nation

- The emergence of TOD around dozens of Metrorail stations is widely hailed as a success by local supporters and observers from around the world. Washington’s transit planners wrote the book on modern joint development, and local governments chimed in with supporting local policies to advance TOD near Metrorail stations.
- Arlington County is arguably the nation’s best TOD success story of the past 30 years.
- Textbook planning principles were introduced to ensure that compact, mixed-use development took form around high-capacity transit nodes.
- Mixed land uses and pedestrian-friendly designs can influence how users access stations.

- Another important travel-demand impact of TOD has been to keep traffic volumes on major arteries more or less in check.
- District of Columbia leaders place a high priority on neighborhood revitalization.
- One of the strongest markets for residential development and the cornerstone of the District’s economic development plan is the U Street Corridor. Since 2000, some 275 condominiums and detached single-family units have been built within a ¼ mile of the U Street Station.

13. Case Study 4 – TOD and Joint Development in the Sunbelt: Miami-Dade County

- Miami-Dade County’s efforts are notable in several respects: (1) a unique institutional framework that allows the County transit agency to take the lead on planning and zoning at transit stations and along transit rights-of-way, (2) a heavy emphasis on transit joint development and public-private partnerships, and (3) a long history of viewing TOD and joint development as important tools for revitalizing inner-city neighborhoods.
- Florida’s Comprehensive Plan stresses the importance of urban and downtown revitalization and encourages both the expansion of mass transit systems and the development of infill sites.
- Despite these intentions, efforts to promote TOD as a growth management tool within state agencies such as the Department of Transportation have been slow.
- In the absence of concretion and specific direction from the state, local governments, in conjunction with some MPOs have taken a more proactive stance toward implementing TOD.
- Florida’s most promising opportunities for TOD are found in Miami-Dade County, where relatively high densities have made public transit a viable transportation option.
- To encourage TOD along Metrorail corridors, the County has sought joint development partners at 11 of the existing 22 station areas. To date, four projects have moved forward, with eight more in the pipeline (see Table 13.1).
- One tool that the County has used to encourage private developers to engage in joint development activities has been the adoption of a rapid transit zone (RTZ).
- The RTZ ordinance specifies that the County and municipality shall jointly undergo a station area design and development process to prepare master plan development standards, but it does not address what recourses are available to the city should it disagree with the County’s vision for the site.

- The four current Metrorail joint project developers interviewed for this case study felt that the RTZ was an asset in the development process.
- In addition to the RTZ tools and incentives, local jurisdictions, such as the city of Miami, actively encourage development in neighborhoods near transit even if they are outside the RTZ.
- Local incentives have mainly included reductions in parking requirements and increases in permitted FARs or per-acre unit densities.

14. Case Study 5 – Chicago’s Transit Villages: Back to the Future for Historic Commuter-Rail Towns

- Development is once again following Chicago’s long-established commuter rail corridors as a growing list of communities are returning to their roots, pursuing TOD to revitalize downtowns that grew up around transit.
- The design and service characteristics of commuter rail present different challenges to TOD vis-à-vis light-rail and heavy rail systems.
- TOD is being promoted on many fronts in greater Chicago.
- In actuality, implementing TOD remains as elusive as elsewhere in the United States. Ultimately, TOD is a local decision, as state law grants zoning powers only to local cities and counties.
- To date, cities and towns in greater Chicago have used a variety of tools to implement TOD, including development bonuses, eminent domain, open market purchases, site assembly, TIF, reduced parking standards, and rezoning.
- TOD emerged as an important consideration in the competition to secure Chicago’s newest transit line along the Northwest Transit Corridor. Local mayors using funds passed through RTA, sponsored an interactive community process leading to the development of TOD sketch plans for the corridor.
- For the Northwest Transit Corridor, development of the seven planned transit villages along the corridor would capture nearly 66,000 additional jobs and 8,700 new dwelling units over and above what is provided for in existing station-area plans (see Figure 14.1).
- Metro Chicago’s experiences point to the potential of using commuter rail designed in a sensitive manner, in combination with supportive public policies and targeted public investments to leverage the revitalization and rejuvenation of older suburban downtowns.

- TOD lessons learned from Metro Chicago include: 1) importance of transit system design; 2) taking the long view; 3) continuity and leadership; 4) development tools in place; 5) managing the parking; and, 6) supportive real-estate market.
- 15. Case Study 6 – Dallas: Using TOD to Create Place and Value in a Sprawling Metroplex**
- Unlike other regions, where the central city initially takes the lead role in promoting TOD, the city of Dallas has largely adopted a “wait-and-see” approach to TOD.
 - The TOD leadership in this property-rights-friendly state, where government and planning have historically had relatively limited roles, has come from suburb and communities and the region’s transit authority.
 - Along the starter LRT line in the city of Dallas, market factors are overcoming the lack of supportive public policy, triggering mixed-use development at some stations.
 - A very different picture emerges in the suburban communities along the DART extensions where market forces have been complemented by public-sector leadership, investment, and supportive policies.
 - The City of Plano a major suburb to the north of Dallas, has consciously embraced the principles of New Urbanism and TOD in hopes of transforming its downtown into a compact, mixed-use urban center.
 - Anchoring the rebirth of downtown Plano, Eastside Village is a \$17.7-million, high-density, mixed-use project fronting directly onto DART’s light-rail station plaza. The 3.6 –acre, 245,000-square-foot project features 234 apartment units and 15,000 square feet of ground-floor retail space.
 - The city of Richardson is taking what is for it the unusual initiative of developing a TOD zoning code for its four stations to create a new template for development.
 - In Richmond, DART is expected to spark upwards of \$300 million in private investment at Galatyn Park, and the City will have invested some \$75 million.
 - TOD lessons from the Dallas region offer the following insights: 1) Dallas TOD success looks much like other places; 2) sophisticated developers make a difference; 3) TOD as “place” making; and 4) ratcheting up TOD a notch in policy direction by the city of Dallas will contribute significantly to further progress.
- 16. Case Study 7 – TOD in the Mountain West: Colorado**
- From the state capital, across the Front Range, and into Rocky Mountain communities, TOD is gaining a steady foothold in a variety of Colorado settings.
 - TOD has not been a product of happenstance. Rather it is a result of careful planning on the part of public, nonprofit, and for-profit interests, all sensitive to the mounting disaffection with growth as usual.
 - Jurisdictions throughout the Denver area are turning to TOD as a tool for managing growth.
 - The City of Denver has introduced a new transit-mixed use zoning district (TMU-30). Its most notable features are the following:
 - Density – developers may build up to 220 feet in height, with a maximum FAR of five to one for their overall master plan.
 - Flexibility – the zone provides a fair amount of latitude in how a project is designed.
 - Parking – developers are entitled to a 25% parking reduction vis-à-vis the city’s standard one off-street space per residential bedroom and tow spaces per 1,000 square feet of office space.
 - In the Denver area, rail transit investments are opening up unprecedented TOD opportunities, although they will not necessarily translate into TOD over the short term, particularly in redevelopment contexts.
- 17. Case Study 8 – Portland’s TODs: Building Community on a Regional Scale**
- The Portland region has the most aggressive TOD program in the United States.
 - Nearly every one of the region’s light-rail stops has witnessed TOD activity to some degree.
 - Over the past 25 years, TOD has become part of the underlying policy framework of Portland’s comprehensive growth management at a community and regional scale.
 - The core objectives of station-area planning in Portland have remained fairly constant over the years. They include the following:
 - Recognizing that station areas are special places and the balances of the region is available for traditional development;
 - Seizing the opportunity afforded by rail transit to promote TOD as part of a broader growth management strategy;
 - Rezoning the influence area around stations to allow transit-supportive uses;
 - Focusing public agency investment and planning efforts at stations with the greatest development opportunity;
 - Building a broad-based cored of support for TOD with elected officials, local government staff, land owners, and neighborhoods; and
 - Setting up a self-sustaining framework to promote TOD once the planning is complete.
 - To help stimulate the construction of transit villages, Portland’s regional government, Metro, operates the innovative TOD Implementation Program using federal transportation funds. The TOD program operates through a series of cooperative agreements between Metro and local jurisdictions, and it utilizes development agreements with private developers. The primary use of TOD-Program funds is site acquisition.
 - Metro’s TOD Program pushes the development envelope by using public-private partnership techniques to secure more TOD-like project than otherwise be developed on a given site.
 - The creation of the Pearl District is the most dramatic transformation of downtown Portland in the last 20 years. Once an “incubator” for start-up businesses in abandoned warehouses, and home to a large artist community, the Pearl District is now an emerging mixed-use neighborhood of upscale lofts housing, parks, art galleries, boutiques, cafes, and restaurants.
 - A major catalyst to the transformation of the Pearl District was the construction of the Portland Streetcar, the first modern streetcar system to be built in the United States.
 - The Pearl District had only a handful of residents in 1990 and 1,300 in 2000. At build out, it will be home to over 10,000 residents in 5,500 housing units, and 21,000 jobs. The area will also have 1 million square feet of new commercial and retail space. See Table 17.3 - Snapshot of Pearl District Development Along Portland Streetcar Line.

18. Case Study 9 – The San Francisco Bay Area: The Challenge of Creating a Transit-Oriented Metropolis

- Exurban sprawl, unaffordable housing, ever-worsening traffic congestion, environmental degradation, is just a few of the reasons that TOD is being actively embraced in the San Francisco Bay Area. Private interests, not-for-profits, and public agencies have all invested time and money in pursuing TOD projects.
- The region’s heavy-rail transit operator, BART, has also become an active participant in leveraging development opportunities around its stations through public-private partnerships.
- Several Bay Area developers today specialize in mixed-use, infill development around transit nodes.
- In 1998, the MTC, the regional metropolitan planning agency, created the Transportation for Livable Communities (TLC) program to provide funding for projects that “strengthen the link between transportation, community goals and land use. The TLC program has evolved to now include three components: capital grants, planning grants, and the Housing Incentive Program (HIP). TLC allocates \$27 million per year (from TEA-21, and state Transportation Development Act monies) to local and county projects that meet various “smart-growth” criteria defined by the MTC. This program has materially enhanced TOD activities in the Bay Area by providing funds for strategic planning and construction of ancillary improvements around stations, including bicycle and pedestrian amenities and compact housing.
- HIP eligibility Requirements (Text Box 18.1):
 - The applicant must be a local city or county, and the proposed housing project must be in the initial planning stages.
 - Eligible project must be within 1/3-mile walk from the center of the development site to a trunk-line transit station. Eligible transit services are bus, ferry, or rail transit with no more than 15-minute headways during the peak commute period.
 - The density thresholds and award amounts proposed are the following:
 - 25 units per acre: \$1,000 per bedroom
 - 40 units per acre: \$1,500 per bedroom
 - 60 units per acre: \$2,000 per bedroom
 - For all affordable units, an additional \$500 per bedroom will be awarded.

- Standard federal match of 11.5% must be provided.
- A pedestrian path of travel from the center of the project to the transit stop must be provided and demonstrated on a site plan and project maps.
- Mixed-use development is encouraged but not required.
- In San Mateo County, the program encouraged the addition of over 1,600 bedrooms along main bus routes and rail transit stops in 2001 through 2002—65% of which were affordable.
- See Table 18.1---MTC’s HIP Project (FY 2001-2002)
- Two major transit agencies in the Bay Area, VTA and BART, have been active in TOD to date.
- VTA prepared a forward-looking, well-received document called *Transit-Oriented Development Design Concepts*. The goal of publishing the document was to “bring together a set of critical ideas and techniques useful for effective coordination of development patterns around major transit stops. VTA gives particular emphasis to creating a mix of uses within walking distances of a transit station. The design guidelines define a TOD as lying within 2,000 feet or a 10-minute walk of a transit node. Densities and design patterns are recommended to intensify and diversify land uses and improve pedestrian access and circulation. VTA suggest not only ensuring a mix of land uses, but also encouraging diversity within each land use.
- Between 1997 and 1990, an estimated 4,500 housing units and some 9 million square feet of commercial-office floor space were added within walking distance of the Tasman West light-rail line serving the heart of Silicon Valley.
- In 1998, VTA created an in-house joint development program principally to tap the development potential of under-utilized park-and-ride lots.
- Ten years after the VTA’s guidelines were published, BART released *Transit-Oriented Development Guidelines*. BART’s TOD guidelines give pedestrians, cyclists, and buses priority over park-and-riders in accessing stations. To date, BART has approached TOD and joint development cautiously. Rather than outright deal making, the agency has opted to co-participate with local and developer interests in promoting transit-supportive development in the vicinity of stations.
- After two slow decades, BART’s joint development activities are today taking off. In total, BART has over \$1 billion in joint development projects in the works, some still on the drawing board and others, like the Fruitvale Transit Village, are well on their way to completion and occupancy.

- To date, some of the more successful joint development projects in the Bay Area have been spearheaded by local jurisdictions or community organizations.

19. Case Study 10 – Southern California: From TODs to a Region of Villages

- Interest in TOD has been propelled by ongoing rapid population growth, worsening congestion, air pollution, and an affordable-housing crunch in Los Angeles, San Diego, and other parts of Southern California.
- A recent study suggests that demand for “dense, walkable neighborhoods” in Southern California will grow substantially, in part due to an aging population a more culturally diverse population base.
- In both San Diego and Los Angeles, growth is gravitating to transit stations in part because of traffic congestion, in the minds of many, is becoming unbearable.
- In San Diego County, a host of progressive polices and programs, introduced by municipalities and the regional planning organization, has helped foster TOD over the past decade. To pave the way toward a more sustainable future, the region’s 18 municipalities and the county government have endorsed the recent smart-growth plan developed by the San Diego Association of Governments (SANDAG).
- SANDAG recently introduced a 5-year \$25-million incentive program to leverage smart-growth pilot projects. These measures are expected to increase the share of jobs within ¼ mile of transit stops from 39% in 2000 to 45% in 2030. As a result, transit’s share of commute trips is expected to jump from 5% to 10% over the same period.
- The City of Sand Diego recently approved its Strategic Framework Element, which updated its already transit-friendly General Plan. TOD guidelines are recommended by its accompanying Action Plan to apply two categories --- urban village centers and transit corridors.
- The degree of interagency coordination to promote TOD in metropolitan Los Angeles has been equally impressive. The Southern California Association of Governments (SCAG) the region’s MPO, worked closely with the Los Angeles County Department of Regional Planning to prepare guidelines for development of livable communities.
- In recent years, the Los Angeles County Department of Regional Planning has devoted considerable resources to TOD planning

along unincorporated portions of the Metro (LRT) Blue Line. Zoning ordinances were enacted to prevent land uses that are incompatible with TOD and to provide density bonuses.

- TOD is also actively promoted by Los Angeles’s regional transit agency for Los Angeles, the MTA. The MTA has assigned responsibility for TOD activities to its Department of Joint Development.
- MTA’s Joint Development Implementation Procedures include the following features:
 - Project proposals initiations/solicitation
 - Proposal evaluation
 - Exclusive negotiations agreement
 - Development agreement
 - Adjacent construction guidelines
 - Statutory basis
- The City of Los Angeles promotes TOD mainly by preparing specific plans for station areas. Zoning reforms, like mixed-use overlays and density bonuses, have been introduced in each district to leverage TOD.
- In California, redevelopment entities are in a particularly good position to leverage TOD because of their considerable fiscal powers. However, when the organizational focus of a redevelopment agency is not on TOD, these powerful entities can easily become impediments instead of helpful partners.
- In the Los Angeles area, a number of innovative financing tools are being employed to leverage TOD.
- See Table 19.1 – TOD Projects in San Diego County.
- See Table 19.2 – Joint Development Projects in Los Angeles County.

20. Research Findings and Policy Lessons

- In the United States, transit joint development, viewed in this study as project-scale TOD on a transit agency’s (or other public entity’s) property, is almost totally limited to rail transit systems.
- More than 110 joint development projects, ranging from air-rights development s to station connection fees, currently exist. The most common form of transit joint development is ground leases of agency land for commercial office development, followed by air-rights leases, operations and construction cost-sharing, and station connection fees.
- America’s best TOD examples start with a vision and proceed to plan execution through aggressive and inclusive station-area planning, backed by supportive zoning, infrastructure

enhancements, and fiscal policies that reward smart-growth investments. Often, zoning overlays are introduced to allow mixed-use projects to be built, and those project complying with specific station-area plans are promptly issued necessary permits and allowed to build as-of-right.

- Relatively little empirical research has been conducted documenting the economic benefits of TOD beyond studies showing that development near rail stations boosts ridership and increases land values.
- Recurring themes and lessons:
 - Political leadership is vital to TOD implementation
 - Inclusiveness and ongoing public input in TOD planning, design, and implementation is essential to success
 - Institutional coordination streamlining is especially crucial to TOD implementation where multiple agencies govern different elements of land development and transit-service delivery.
 - More permissive regulatory environments and enabling legislation are often needed if transit agencies, local governments, and regional planning organizations are to proactively implant TOD.
 - Successful TODs start with shared visions that guide planning and implementation for years to come.
 - Start TOD planning early.
 - TOD success can hinge on rewarding developers with measures that grant more latitude in designing projects.
 - Successful TODs emphasize “place-making”: creating attractive, memorable, human-scale environs with an accent on quality-of-life and civic spaces.
 - TODs invite bold policies that push conventional boundaries and acknowledge the unique market niches that are being served.
 - Station-area plans and planning matter.
- TOD ridership bonuses are substantially a product of residential self-selection, suggesting policy reforms should focus on allowing residents to sort themselves into transit-served neighborhoods unimpeded.
 - TOD benefits are not automatic and generally accrue during upswings in local economies when traffic congestion worsens.
 - TODs benefit from recapturing some of the value conferred by transit investments to generate revenues needed for ancillary improvements.

- Creative financing is essential to spreading the risks, expanding the base of knowledge and experience, and tapping into the fiscal advantages of certain partners, such as local governments’ superior bond ratings and guarantees, to make project pencil out.
- Market fundamentals, not a TOD label, govern whether private capital gets invested around transit stations.
- In urban settings, rationalizing parking policies in relation to TOD is essential to influencing how a TOD station will be accessed and to avoiding conflicts over whether land goes to parking or development.
- Even though mixed land uses are a trademark of TOD, arriving at a workable program poses planning and design challenges that need to be overcome for a successful TOD.
- Walking access and quality of circulation and the overall pedestrian environment are critical to TODs; however, the conflict between stations as “nodes” and “places” often makes this difficult.
- Transit service improvements and system upgrades can trigger TOD activities, especially in settings with expensive housing markets and a pent-up demand for transit-oriented living.
- See Table 20.1 – Matrix Summary of Case Studies that Highlight TOD Lesson

21. Policy Reflections and Future Research Directions

- Fertile ground for new research lie in monetizing the benefits of TOD on the basis of outcomes like net reductions in VMT that can be attributed to TOD.
- Another promising line of study would involve developing typologies of TODs as they unfold and take shape.
- Research on consumer attitudes about living and working in TODs might be useful supplements to studies on land-market impacts.

Appendix B

Legal Research Digest, TCRP Report Number 12

The Zoning and Real Estate Implications of Transit-Oriented-Development,
Transportation Research Board, National Research Council, January 1999

This research paper provides information on legal and other issues associated with transit-oriented development.

Following is summary of the information provided in the report relevant to the development of transit-oriented development in the New Orleans Region. The full report is available at: www.gulliver.trb.org/publications/tcrp/tcrp_lrd_12.pdf

Note: The paper discusses relevant case law for each of the topics outlined below. Therefore, this paper is considered an essential starting point for development of TOD policies for the New Orleans region.

1. Introduction

Transit-oriented development (TOD) is designed to accomplish several key public objectives. First, and foremost, a TOD is designed to encourage residents and workers to utilize public transit rather than the automobile as a primary means of transportation. A second purpose, related to the first, is the minimization of congestion on surrounding roadways. Finally, a TOD is designed to increase pedestrian utilization of streets, sidewalks and other transportation facilities. TODs, as a form of neotraditional development, are not just an attempt to encourage greater utilization of public transit.

This report describes the major components of local land use and zoning controls that are used to encourage transit-oriented development.

2. Elements of Transit-Oriented Development Policies

A TOD ordinance covers the following major elements: amount and type of development, and spatial, and relational characteristics.

TOD regulations are relational in that they use innovative urban design guidelines to ensure not only compatibility between mixed land uses, but also that those land uses relate functionally to the transit system.

Traditional land use controls designed to alleviate traffic congestion include zoning (especially large-lot zoning), subdivision regulations, and off-street parking requirements.

While TOD regulations guide development within a transit station area or corridor, communities may use ancillary regulations to guide growth in these areas and to create procedures for implementing transit-supportive land use policies.

a. Regulating Development Within Station Nodes and Corridors

Distance from Transit Stations

The distance persons are willing to walk to a transit stop is typically about 5 minutes or 1,000 feet which expands to 1,500 to 2,000 feet around high frequency, high speed facilities such as commuter or light rail.

Density and Use Regulations

The determination of appropriate densities should take into consideration the type of transit service available during the life of the capital improvements program (CIP).

Most jurisdictions encourage density increases through the use of density bonuses in exchange for specified urban design elements or the provision of public benefits.

While few cities in the United States have provisions that require minimum densities, minimum and maximum densities are often included as part of a planned unit development (PUD) approval or development agreement.

Bulk, Setback and Area Controls

TOD ordinances have several features that distinguish them from conventional zoning regulations. First, TOD ordinances often feature maximum setback (or “build-to” lines) rather than minimum setbacks.

Second, the frontage and lot size requirements in TODs are reduced in order to encourage higher densities.

Third, TOD ordinances often require urban design amenities such as colonnades, front porches, and rear parking in order to stimulate pedestrian activity at the street level.

Station Area Urban Form

There are six basic modes of a TOD that have emerged in actual practice and in planning theory. These include single-use corridor development, mixed-use corridor development, neotraditional or traditional neighborhood development, transit-oriented development and pedestrian pockets, hamlets and villages, and purlieus.

b. Ancillary Techniques

Urban Growth Boundaries and Tier Systems

For development to occur under TOD regulations, development at the periphery of transportation corridors must be controlled as well.

Regional urban form concepts include urban growth boundaries, centers and nodes, and corridors. A UGB is a mapped line that separates urbanizable land from rural land and within which urban growth is contained for a specified time period.

A more sophisticated application of the UGB approach is the use of “tier system”, which has been applied in San Diego, California, and Minneapolis Minnesota.

The tier system divides the community into “growth” and “limited growth” categories and adds the tiers as subdivisions of those general categories.

Joint Development

The term “joint development” refers to the development of real estate that is integrated with a transit station or other transit facility.

Joint development approaches typically include techniques that capitalize on real property assets that are acquired in the course of transit system development. Examples include those involving property taxes or assessments and excess land acquisitions such as land and air rights leasing, negotiated private-sector investments in property and transit station capital costs, connection fees for direction tie-ins to transit stations, and concessions at transit stations.

An example of the range of powers needed to effectuate joint development is provided by the state legislation governing rail transit facilities for the Los Angeles Metropolitan Transit Authority. This legislation authorizes the commission to utilize private entities for the study, planning, design, development, acquisition, installation, construction, leasing, and warranty of rail transit systems.

The zoning and land use controls adopted by the local government must be carefully considered in the joint development process.

Joint development legislation may also require that the services provided pursuant to the agreement be consistent with the use and zoning of land adjacent to the right-of-way.

The transit agency and local governments, through cooperative agreements, can aggregate all of the essential governmental powers and authorities for successful large-scale joint development:

- Site assemblage
- Flexibility (or relaxation) of zoning or zoning incentives

- Low-cost financing (through tax-exempt financing, sale-leaseback, lease or loan guarantees, federal grants)
- Construction of infrastructure
- Coordination between governmental entities
- Expedited processing
- Land use coordination
- Establishment or creation of a growth center and, to an extent, a captive market of transit riders

Concurrency

Concurrency regulations tie the issuance of development permits, such as rezonings, planned unit development permits, to level of service (LOS) standards identified in a comprehensive plan.

Transportation concurrency management areas (TCMAs) are a framework for using concurrency management in a manner conducive to mass transit, economic development, and a desirable urban form.

Transfer of Development Rights (TDRs)

The transit agency can use TDRs to encourage transit-supportive development by working with general-purpose local governments to design transit station areas as receiving areas and encouraging development restrictions in peripheral areas.

c. Procedures for Implementing TOD

Specific Plans

A specific plan implements the comprehensive plan in one of three ways: (1) by acting as a policy statement that refines the general plan's policies with respect to a specific land area; (2) by directly regulating land use; or (3) by combining detailed policies and regulations into a focused scheme of development.

The transit agency can take a leadership role in sponsoring specific plans with transit-supportive land use policies in order to provide a sound legal and planning basis for subsequent development.

Planned Unit Development (PUD)

A PUD allows a local government to control the development of individual tracts of land by specifying the permissible form of development in accordance with the local PUD ordinances.

Because PUD zoning allows greater flexibility than traditional zoning, greater emphasis is given to site planning than in single-use districts.

Development Agreements

Under a development agreement the local government agrees to “freeze” the regulations applicable to a particular property, often in consideration for substantial contributions by the landowners to public infrastructure, environmental mitigation, or affordable housing. A number of states now expressly authorize development agreements by statute.

3. Legal Basis for Transit-Oriented Development

The individual elements of transit-oriented development, such as, mixed uses, flexible zoning, and the use of eminent domain powers and financial incentives to encourage joint development, have been litigated in the courts. In addition, the United States Court of Appeals for the Eleventh Circuit has affirmed that the use of traditional neighborhood development principles is a legitimate use of police powers.

a. Constitutional Issues: Takings, Due Process, and Equal Protection

TOD ordinances and other transit-supportive land use regulations may be challenged on various constitutional grounds, including the takings, due process, and equal protection clauses of the federal and state constitutions. In addition, the use of eminent domain and financial incentives in joint public-private partnership arrangements to encourage development in transit corridors may be challenged for a lack of a valid public purpose or under the public purpose or under the public emoluments clauses of state constitutions.

The judicial approach to land use regulations that are designed to effectuate a shift in transportation modes has been characterized by judicial deference. This standard of deference, which has allowed local governments to enforce single-use zoning with generous parking requirements, should also allow local governments to choose more compact, transit-supportive development patterns.

In case law to date, the court has described the four major types of constitutional challenges to a land use regulation. First, a land use regulation can be challenged as a taking without just compensation under the Fifth Amendment of the United States Constitution. In a takings case, unlike substantive due process, the courts balance the public interest supporting the governmental action against the severity of the private deprivation. The remedy for a just compensation is momentary damages.

The second type of challenge is known as a “due process takings” claim. This type of claim asserts that the application of the regulation goes so far and destroys the value of the property to such an extent that it has accomplished a taking without the use of eminent domain procedures, which is an invalid exercise of the police powers. The remedy for a due process takings claim is invalidation of the offending regulation and actual damages for the application of the regulations.

The third type of challenge is a substantive due process challenge, which alleges that the regulation is arbitrary and capricious, does not bear substantial relation to the public relation to the public health, safety, morals, or general welfare, and is therefore an invalid exercise of the police power. In order to sustain a substantive due process challenge, the plaintiff must prove that the government has acted arbitrarily and capriciously.

The fourth type of challenge identified is that of equal protection. Unless the regulation applies to a suspect class or invades a fundamental right, it will survive judicial scrutiny if it is rationally related to a legitimate public purpose.

b. Zoning Authority

Courts have had little trouble approving of the use of zoning to encourage a shift in modes of travel from roads and highways to public transportation

The TOD regulations must provide adequate authority to deny uses deemed inconsistent with the character of the TOD and the ridership objectives of the ordinance. Absent such authority, the integrity of the TOD program could be undermined by development that does not functionally relate to the transit facilities that support it. The comprehensive plan and sound planning policies can provide the basis for denying functionally inconsistent uses. In addition, the courts--- even in conservative jurisdictions such as Virginia---will respect local planning policies designed to preserve community character.

c. Environmental Impact Statements and Environmental Reporting Requirements

Environmental impact statements (EIS) are often required for large-scale transportation projects such as highways and rail transit facilities. In some states, the EIS requirements apply to development permits for private projects, as well as to publicly sponsored projects. EIS requirements have often been used to stall or to defeat highway

construction projects. However, the courts have been reluctant to require an analysis of transit as an alternative to construction of highway projects in EIS documents.

In one reported case, the EIS process was used to stall a neotraditional development.

d. Joint Development and Redevelopment Authority

A careful analysis of state and federal law should be undertaken in order to determine whether a joint development project would be permissible under the state as well as the federal, constitutions.

Many agencies use financing agreements to provide for private contributions towards capital and debt amortization costs, bond financing to enable private partners to secure capital at discounted costs, and tax increment financing to recoup site acquisition improvements and to provide revenues for bond retirement. Special assessments have also been approved as a method of financing transit facilities, thereby authorizing transit authorities to recoup some of the value added to surrounding real property as a result of the construction of transit facilities.

Public/private partnerships are an effective way of merging public powers with private resources in order to implement transit-oriented development.

e. Regional General Welfare and Intergovernmental Agreements

Regional general welfare is a concept that requires local governments to take the impact of local zoning on regional needs, such as housing, into consideration.

States with regional general welfare requirements will find that intergovernmental agreements provide a useful framework for regulating land use across jurisdictional boundaries.

f. Certainty and Definiteness

Neotraditionalists decry the complexity of zoning ordinances and subdivision regulations, preferring to regulate through the use of design codes that emphasize visual design archetypes rather than textual standards.

However, visual aids and flexible standards potentially confer wide discretion in those administering the ordinance, which, in turn, creates due process concerns relating to the certainty and definiteness of the standards used in the codes.

Zoning ordinances must be reasonably definite and certain so that they may be reasonably interpreted. An ordinance is void for vagueness where it forbids or requires an act in terms so vague that persons of common intelligence must guess at its meaning and would differ as to its applications. It has been held specifically that a zoning ordinance must set forth clear and definite standards with regards to the types of uses that may be allowed or prohibited.

The use of a PUD procedure resolves the issue of certainty and definiteness in the administration of a TOD scheme in many states. Because the designation of a PUD is considered a rezoning, courts often grant considerable latitude in the development of standards for the designation of a PUD.

The TOD is normally the first stage in the approval process, with subsequent site plans or subdivision plats required as the development nears completion. The approval of subsequent site plans, subdivision plats, or building plats will be governed by the TOD regulations applied to the property.

g. Comprehensive Plan Consistency

Many states now require local governments to take public transit into consideration as part of the comprehensive planning process. The “second generation” programs balance transportation needs with other public policies and objectives, involve sophisticated fair share planning, and require the use of specific implementation measures to achieve transportation goals and objectives.

The comprehensive plan requirement has experienced a gradual evolution from its undefined status in the “Standard Zoning Enabling Act” to the elevation of the plan as the constitution for land use regulations and land use decisions.

4. Conclusions

At the conceptual level, transit-oriented development has a sound legal and constitutional basis.

The implementation of transit-oriented development strategies presents legal issues that must be resolved through careful drafting. These include the use of comprehensive planning studies, comprehensive planning policies, and careful drafting procedures for implementing TOD strategies.

Both transit agencies and general-purpose local governments must realize that TOD ordinances and neotraditional planning standards are only part of the overall picture. What happens outside of the transit corridors is equally important.

Intergovernmental agreements and metropolitan transportation plans are mechanisms for producing a realistic and affective transition of uses along transit corridors that cross-jurisdictional boundaries.

TOD is a promising concept that offers to bolster transit ridership while producing affordable housing and economic development opportunities along transit corridors. It responds to a real public need and is increasingly recognized in state enabling legislation. While it does raise some legal issues with regard to implementation, these issues are not insurmountable. When the principles discussed in this report are taken into consideration, valid TOD strategies can be come reality.

Appendix C

Examples of How Transit-Oriented Development Can Be Achieved

- Selected Case Studies and References

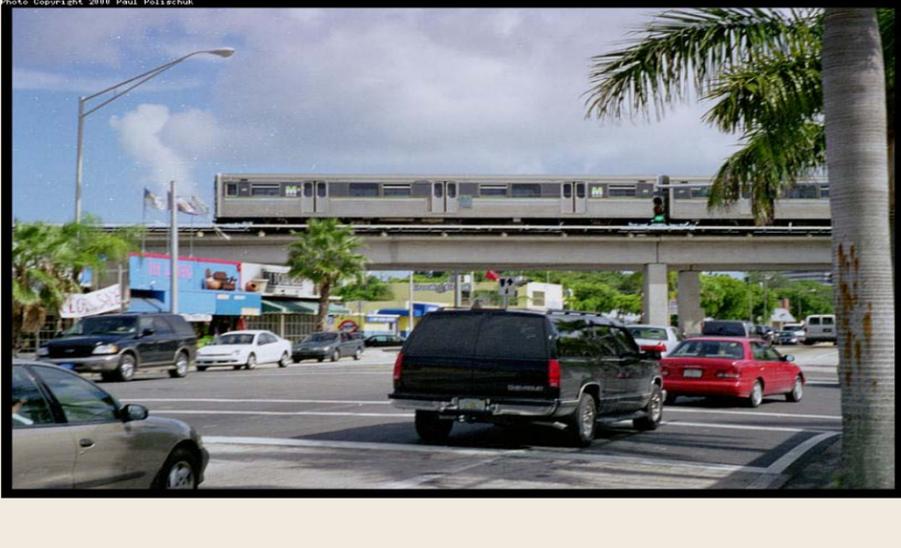
**Appendix C - Examples of How Transit-Oriented Development Can Be Achieved
Selected Case Studies and References**

Location/Station Name	Implementing Agencies / Year(s)	Description of Primary Activities / Uses	Application of TOD Policies	Planned Development	Sources for Additional Information	Station Area Pictures
Cityplace Station, Dallas, TX	Dallas Area Rapid Transit (DART)	<ul style="list-style-type: none"> ▪ Station is underneath an existing office tower 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Joint development ▪ Station area urban form ▪ Density and use regulations 	<ul style="list-style-type: none"> ▪ Area developers cite proximity to DART stations as a primary reason for building in the vicinity. ▪ Proposed 300-room hotel ▪ Proposed 43-story office tower ▪ Proposed 230 apartment complex ▪ Proposed \$50-million West Village project – 6 buildings to house townhouse lofts, retail and a theater. ▪ Proposed \$23-million 244-unit luxury apartment complex. ▪ Many of the proposed uses will also be served by the McKinney Avenue Trolley (an historic streetcar line). 	<p>DART's Official Website: www.dart.org</p> <p>Light Rail Advocacy Group Website: www.lightrailnow.org</p>	
Mockingbird Station, Dallas, TX	DART	<ul style="list-style-type: none"> ▪ An eight-story office complex located within walking distance. ▪ Station is connected to a Radisson Hotel. ▪ A 500-unit luxury apartment complex located in a former Dr. Pepper Bottling company site. 	<ul style="list-style-type: none"> ▪ Distance from transit stations. ▪ Density and use regulations. ▪ Station area urban form. ▪ Joint development 	<ul style="list-style-type: none"> ▪ Former Southwestern Bell telephone warehouse and office tower will be converted to retail and 220 loft apartments with additional mixed-use development including an 8-screen movie theater complex, restaurants, office space, a music store and a future hotel. 	<p>DART's Official Website: www.dart.org</p> <p>Light Rail Advocacy Group Website: www.lightrailnow.org</p>	

**Appendix C - Examples of How Transit-Oriented Development Can Be Achieved
Selected Case Studies and References**

Location/Station Name	Implementing Agencies / Year(s)	Description of Primary Activities / Uses	Application of TOD Policies	Planned Development	Sources for Additional Information	Station Area Pictures
Galatyn Park Station, Dallas TX	DART	<ul style="list-style-type: none"> ▪ The Renaissance Hotel ▪ The Eisemann Center for the Performing Arts ▪ Galatyn Park Urban Center 	<ul style="list-style-type: none"> ▪ Distance from transit stations. ▪ Density and use regulations. ▪ Station area urban form. 	<ul style="list-style-type: none"> ▪ The center uses DART as promotion for its destination for concerts, state plays, broadcast productions and corporate meetings. 	DART's Official Website: www.dart.org Light Rail Advocacy Group Website: www.lightrailnow.org	
Dadeland South Metrorail Station (AKA Datran), Miami, FL	Miami-Dade Transit (MDT)	<ul style="list-style-type: none"> ▪ Two class A office buildings (Datran I and II), totaling 472,000 square feet. ▪ 350,000 square feet of retail space. ▪ 3,500 parking spaces (1,000 owned by MDT for Metrorail rider use). ▪ 305-room luxury Marriott Hotel. ▪ South Miami-Dade Busway. ▪ Art en Route – "16 Smokes" 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Joint Development ▪ Development agreements ▪ Specific plan 	<ul style="list-style-type: none"> ▪ The city owns the 6.5-acre site that is adjacent to the station. ▪ An additional office building and hotel are planned for the station site. 	MDT Official Website: www.miamidade.gov/transit City of Miami Official Website: www.ci.miami.fl.us South Florida Community Development Coalition Official Website: www.floridacdc.org	

**Appendix C - Examples of How Transit-Oriented Development Can Be Achieved
Selected Case Studies and References**

Location/Station Name	Implementing Agencies / Year(s)	Description of Primary Activities / Uses	Application of TOD Policies	Planned Development	Sources for Additional Information	Station Area Pictures
Dr. Martin Luther King, Jr. Plaza Metrorail Station, Miami FL	MDT	<ul style="list-style-type: none"> ▪ Existing building is being partially demolished with the remaining portion undergoing renovation. ▪ Art en Route – “On Our Way” 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Joint development ▪ Development agreements ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Lease purchase agreement with a local non-profit organization, Business Assistance Center, to construct a mixed-use development that will include an office building with 172,000 square feet of rentable office space and 13,5000 square feet of rentable retail/support services space. 	<p>MDT Official Website: www.miamidade.gov/transit</p> <p>City of Miami Official Website: www.ci.miami.fl.us</p> <p>South Florida Community Development Coalition Official Website: www.floridacdc.org</p>	
Santa Clara Metrorail Station, Miami, FL	MDT	<ul style="list-style-type: none"> ▪ Miami-Dade Community College ▪ Lindsey Hopkins Technical Education Center ▪ Art en Route – “Ceremony of the Tropics” 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Joint development ▪ Development agreements ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Developers are in a 90-year lease agreement with Dade County and will construct 208 affordable housing units, 200 residential parking spaces with 88 of those dedicated to Metrorail riders. 	<p>MDT Official Website: www.miamidade.gov/transit</p> <p>City of Miami Official Website: www.ci.miami.fl.us</p> <p>South Florida Community Development Coalition Official Website: www.floridacdc.org</p>	

**Appendix C - Examples of How Transit-Oriented Development Can Be Achieved
Selected Case Studies and References**

Location/Station Name	Implementing Agencies / Year(s)	Description of Primary Activities / Uses	Application of TOD Policies	Planned Development	Sources for Additional Information	Station Area Pictures
Lindbergh Station, Atlanta, GA	Metropolitan Atlanta Rapid Transit Authority (MARTA)	<ul style="list-style-type: none"> ▪ Two 14-story one million sq. ft. BellSouth towers 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Phase II development will consist of 230,00 rentable sq. ft. Class "A" office building with seven levels of parking ▪ 140,000 sq. ft. of retail space ▪ "Extended Stay Suite" hotel ▪ 421 apartments and condominiums 	<p>MARTA's Official Website: www.itsmarta.com</p> <p>Atlanta Business Chronicle Official Website: http://atlanta.bizjournals.com</p> <p>NYC-Worldwide Subway Advocacy Site: http://world.nycsubway.org/index.html</p>	
Lakewood Transit Station, Atlanta, GA	MARTA	<ul style="list-style-type: none"> ▪ Mixture of residential and commercial uses throughout the area 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Mixed use project with 192 residential units and two 100,00 sq. ft. office towers 	<p>MARTA's Official Website: www.itsmarta.com</p> <p>Living Atlanta Style www.dryerbuzz.com</p> <p>NYC-Worldwide Subway Advocacy Site: http://world.nycsubway.org/index.html</p>	

**Appendix C - Examples of How Transit-Oriented Development Can Be Achieved
Selected Case Studies and References**

Location/Station Name	Implementing Agencies / Year(s)	Description of Primary Activities / Uses	Application of TOD Policies	Planned Development	Sources for Additional Information	Station Area Pictures
Chamblee Transit Station, Atlanta, GA	MARTA	<ul style="list-style-type: none"> ▪ \$22 million Peachtree-Malone residential lofts ▪ Jefferson At Peachtree apartments ▪ Lowe's Home Improvement store 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Phase II will consist of 100-unit multi-story residential units 	<p>MARTA's Official Website: www.itsmarta.com</p> <p>Atlanta Business Chronicle Official Website: http://atlanta.bizjournals.com</p> <p>NYC-Worldwide Subway Advocacy Site: http://world.nycsubway.org/index.html</p>	

**Appendix C - Examples of How Transit-Oriented Development Can Be Achieved
Selected Case Studies and References**

Location/Station Name	Implementing Agencies / Year(s)	Description of Primary Activities / Uses	Application of TOD Policies	Planned Development	Sources for Additional Information	Station Area Pictures
Rio Vista West Station, San Diego, CA	Metropolitan Transportation Development Board (MTDB)	<ul style="list-style-type: none"> ▪ Standard shopping center ▪ Residential units located in three-story structures ▪ 240 condominium units ▪ Limited parking throughout the area 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Joint Development ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Final residential phase will consist of 1000-units. ▪ 30,000-50,000 sq. ft. of small office and neighborhood retail. 	California Transit Oriented Development Searchable Database: http://video.dot.ca.gov:8180/site/miscellaneous/NewHome.jsp	
Whisman Station, Mountain View, CA	Santa Clara Valley Transportation Authority (VTA)	<ul style="list-style-type: none"> ▪ Residential and office space ▪ Approximately 500 homes at moderate densities 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Joint Development ▪ Development agreements ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Future phases will consist of additional residential and commercial development 	California Transit Oriented Development Searchable Database: http://video.dot.ca.gov:8180/site/miscellaneous/NewHome.jsp	

**Appendix C - Examples of How Transit-Oriented Development Can Be Achieved
Selected Case Studies and References**

Location/Station Name	Implementing Agencies / Year(s)	Description of Primary Activities / Uses	Application of TOD Policies	Planned Development	Sources for Additional Information	Station Area Pictures
The Crossings-San Antonio Caltrain Station, Mountain View, CA	CALTRAIN	<ul style="list-style-type: none"> ▪ Residential and commercial development at various densities 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Joint Development ▪ Development agreements ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Future development will consist of additional mixed use in the area 	California Transit Oriented Development Searchable Database: http://video.dot.ca.gov:8180/site/miscellaneous/NewHome.jsp	
Fruitvale Village Station, Oakland, CA	Bay Area Rapid Transit (BART)	<ul style="list-style-type: none"> ▪ Mixed use development throughout the area including commercial and office space 	<ul style="list-style-type: none"> ▪ Distance from transit stations ▪ Density and use regulations ▪ Station area urban form ▪ Joint Development ▪ Development agreements ▪ Specific plan 	<ul style="list-style-type: none"> ▪ Future phases will consist of affordable rental residential units ▪ Redesign of the streetscapes throughout the area 	California Transit Oriented Development Searchable Database: http://video.dot.ca.gov:8180/site/miscellaneous/NewHome.jsp Fruitvale Village's Official Website: www.fruitvalevillage.net BART's Official Website: www.bart.gov	

Appendix D

Photographs of Light Rail Transit Applications



The River LINE, South New Jersey - Typical Station Platform



The River LINE, Beverley Station, South New Jersey – Suburban Station



Montpellier, France LRT Station – Urban Station



The River LINE, Walter Rand TC Station, South New Jersey - Urban Station



Airport MAX Station, Portland Oregon - At Airport Terminal



MAX Station, Pioneer Square, Portland Oregon



MAX Station, Lloyd Station, Portland Oregon



MAX Train Downtown, Portland Oregon



Seaside Modern TRAM (LRT) Athens Greece



Modern TRAM (LRT) Glyfada Greece – Typical Station Platform



Seaside Modern TRAM (LRT) Glyfada Greece



Modern TRAM (LRT) Glyfada Greece - Integration Into Urban Setting

Appendix E

New Orleans Light Rail Transit Program:

An Economic Overview - Prepared by The Urban Innovations Group, New Orleans LA. July 2004

Table of Contents

EXECUTIVE SUMMARY

INTRODUCTION6

KENNER STATION DISTRICT S2: WILLIAMS BOULEVARD

 WILLIAMS BOULEVARD STATION DISTRICT DEMOGRAPHICS6

 CURRENT WILLIAMS BOULEVARD STATION DISTRICT EMPLOYMENT6

 PROPOSED WILLIAMS BOULEVARD STATION DISTRICT LAND USES7

METAIRIE LOCATION ANALYSIS: S6: CAUSEWAY NORTH7

 CAUSEWAY NORTH STATION DISTRICT DEMOGRAPHICS7

 CURRENT CAUSEWAY NORTH STATION DISTRICT EMPLOYMENT7

 PROPOSED CAUSEWAY NORTH STATION DISTRICT LAND USES7

NEW ORLEANS LOCATION ANALYSIS: S9: CARROLLTON NORTH7

 CARROLLTON NORTH STATION DISTRICT DEMOGRAPHICS7

 CURRENT CARROLLTON NORTH STATION DISTRICT EMPLOYMENT8

 PROPOSED CARROLLTON NORTH STATION DISTRICT LAND USES8

AIMS AND OBJECTIVES8

METHODOLOGY8

STATION DISTRICT ECONOMIC ANALYSIS9

 PARISH-WIDE LAND USES9

Orleans Parish Land Use Summary9

Jefferson Parish Land Use Summary9

 PARISH-WIDE EMPLOYMENT TOTALS9

Orleans Parish Employment Summary9

Jefferson Parish Employment Summary9

 PARISH-WIDE JOBS PER ACRE9

Potential Development by Land Use Category15

Potential Jobs Induced by Light Rail Stations15

New Commercial Investment and Industrial Development15

Projected Investment at Stations15

 NEW DEVELOPMENT ABSORPTION RATES15

Projected Premium to Parish-Wide Absorption Rates16

Development Forecast Conclusions16

PROPERTY VALUE ENHANCEMENTS16

EXECUTIVE SUMMARY

The Innovation Group was engaged by Bechtel as an economic consultant subcontractor to prepare a technical study to quantify the economic development potential that could be induced by the development of New Orleans Light Rail Transit station districts. This analysis is intended to be suitable for inclusion in a public package, to complement a broader planning study in support of the NOLRT initiative, and is not intended to be a stand-alone product. In this analysis, three single stations along the proposed route are examined, including one in Orleans Parish, one in Jefferson Parish, and one within the Kenner city limits. Consideration is given to the potential volume of new jobs that may be created in new and existing businesses in areas surrounding the stations, and the potential induced investment on new and renovated properties.

In order to make these projections, The Innovation Group had to rely on Bechtel for schematic assumptions regarding areas targeted for new or additional development around each of the station districts. It should be noted that this necessitated an assumption that private businesses (not Bechtel, government, or Light Rail) would be induced to develop these parcels, due to the expectation that the mix of easy access for employees, easy access for patrons, and attractive potential pedestrian intercept figures would result in highly feasible business opportunities. We believe that these assumptions all have merit, though we have also developed a methodology that takes into consideration the fact that when new properties are developed, there is a time lag before it can all be absorbed by new demand. **(Note: see Appendix F for the Bechtel Summary Tables and Concept Plans, for the three station districts included in this economic analysis)**

Our projections also admittedly provide for broad ranges in potential jobs, investment, and square footage of new development. A distinction was drawn between areas noted by Bechtel for commercial revitalization on allowable buildable land versus vacant allowable buildable land. Some of the occupied properties may undergo renovations or reconstruction, and some may hire additional employees to accommodate the expected increases in demand. Others will not, and there is no way to determine (or mandate) how these business owners and property owners will react. This document, together with Bechtel's schematic plans for potential future development, can be used by planners to make further assumptions as to where within these ranges the potential outcomes may lie.

The methodology followed to develop these projections required a lengthy series of calculations based on historical regional data and specific data pertaining to the station districts considered in this analysis (Williams Boulevard, Causeway North, and Carrollton North). The step-by-step methodology used to derive the summary conclusions provided below is explained on pages 10 and 11 of this analysis.

Station District S2

At the Williams Boulevard station district it is estimated that between 2,464 and 3,141 jobs could be provided in the allowable building areas, of which between 528 and 679 jobs would be at currently vacant properties. The total new investment potential on the vacant sites is estimated to be in the range of \$25 to \$32 million, and could fall in the range of \$125 to \$160 million when considering all allowable building areas. For the Williams Boulevard station district it is estimated that between 200,000 and 257,000 square feet of vacant space could be absorbed by 2015 assuming no premium to absorption lease rates, whereas between 1.25 and 1.61 million square feet of space could be absorbed if businesses recognize the premium that the light rail station should provide.

Station District S6

At the Causeway North station district it is estimated that between 626 and 1,001 jobs could be provided in the allowable building areas, of which between 140 and 224 jobs would be at currently vacant properties. The total new investment potential on the vacant sites is estimated to be in the range of \$7 to \$12 million, and could fall in the range of \$32 to \$52 million when considering all allowable building areas. It is estimated that between 48,000 and 77,000 square feet of vacant space could be absorbed by 2015 assuming no premium to absorption lease rates, whereas between 325,000 and 520,000 square feet of space could be absorbed if businesses recognize the premium that the Causeway North regional/multimodal light rail should provide.

Station District S9

At the Carrollton North station district it is estimated that between 855 and 1,221 jobs could be provided in the allowable building areas, of which between 99 and 141 jobs would be at currently vacant properties. The total new investment potential on the vacant sites is estimated to be in the range of \$3 to \$5 million, and could fall in the range of \$28 to \$40 million when considering all allowable building areas. It is estimated that between 33,000 and 47,000 square feet of vacant space could be

absorbed by 2015 at the Carrollton North station district assuming no premium to absorption lease rates, whereas between 183,000 and 386,000

square feet of space could be absorbed if businesses recognize the premium that the light rail station should provide.

Caveats and assumptions used throughout the report are worth examination when considering the results summarized below, as the range in our projection is based on numerous factors.

One of the most significant factors considered is the benefit that light rail stations provide surrounding areas with respect to potential development and property values, which are inter-related in terms of rents that can be derived. Literature on this subject has been inconclusive as to the magnitude of the potential benefits. We have derived a base case scenario for potential future development, which is based on the historical absorption of business and industrial properties in these jurisdictions. Even without the development of the light rail network, over the course of the next decade some new commercial and industrial space would be demanded. We examined a previous 'hot spot', Kenner in the early 1990's, to see what kind of premium to a regional absorption rate should apply around the stations. Our analysis conclusions therefore provides for both a 'base case', reflecting no premium applied to the appeal of being near a station, and a 'development case', which applies the premium absorption rates to the potential area for new development. We believe that the premium figures are appropriate based on the relative success that areas around the country have experienced through the development of highly utilized neighborhood light rail stations, though both figures are presented to demonstrate also the worst case scenario.

Investment and Jobs at Stations, Allowable Building Area						
Development Scenario						
<i>INVESTMENT</i>	Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
<i>Light Rail Study Categories</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	\$102,146,784	\$130,431,195	\$25,371,744	\$40,594,762	\$27,829,597	\$39,756,572
INDUSTRIAL	\$23,409,418	\$29,425,870	\$7,006,965	\$11,211,147	-	-
TOTAL	\$125,556,202	\$159,857,065	\$32,378,709	\$51,805,909	\$27,829,597	\$39,756,572
<i>JOBS</i>						
COMMERCIAL REVITALIZATION	2,196	2,804	545	873	855	1,221
INDUSTRIAL	268	337	80	128	-	-
TOTAL	2,464	3,141	626	1,001	855	1,221

Investment and Jobs at Stations, Vacant Parcels						
Development Scenario						
<i>INVESTMENT</i>	Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
<i>Light Rail Study Categories</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	\$24,060,074	\$30,934,389	\$5,529,249	\$8,846,762	\$3,222,867	\$4,604,096
INDUSTRIAL	\$916,030	\$1,177,752	\$1,849,236	\$2,958,780	-	-
TOTAL	\$24,976,104	\$32,112,140	\$7,378,485	\$11,805,542	\$3,222,867	\$4,604,096
<i>JOBS</i>						
COMMERCIAL REVITALIZATION	517	665	119	190	99	141
INDUSTRIAL	10	13	21	34	-	-
TOTAL	528	679	140	224	99	141

Source: Computed by author
Note: Differences in Totals are a result of rounding

Projected Absorption of Vacant Building Area, Stations, 2015 (Base Case)							
Station	Category	Vacant Building Area (ft ²)		Absorption (ft ²)		Remaining Vacant Land (ft ²)	
		<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
<i>Williams Station (S2)</i>	Commercial	1,338,605	1,721,064	198,681	255,447	1,139,924	1,465,617
	Industrial	121,594	156,335	1,221	1,570	120,373	154,765
Subtotal Williams		1,460,199	1,877,399	199,902	257,018	1,260,297	1,620,381
<i>Causeway Station (S6)</i>	Commercial	307,625	492,198	45,659	73,054	261,966	419,144
	Industrial	245,468	392,749	2,466	3,945	243,002	388,804
Subtotal Causeway		553,093	884,947	48,125	76,999	504,968	807,948
<i>Carrollton N. Station (S9)</i>	Commercial	293,769	419,670	32,966	47,094	260,803	372,576
	Industrial	-	-	-	-	-	-
Subtotal Carrollton N.		293,769	419,670	32,966	47,094	260,803	372,576

*Source: Computed by author
Note: Differences in Totals are a result of rounding*

Projected Absorption of Vacant Building Area, Stations, 2015 (Development Case)							
Station	Category	Vacant Building Area (ft ²)		Absorption (ft ²)		Remaining Vacant Land (ft ²)	
		<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
<i>Williams Station (S2)</i>	Commercial	1,338,605	1,721,064	1,230,238	1,581,735	108,367	139,329
	Industrial	121,594	156,335	20,917	26,894	100,677	129,441
Subtotal Williams		1,460,199	1,877,399	1,251,155	1,608,629	209,044	268,770
<i>Causeway Station (S6)</i>	Commercial	307,625	492,198	282,721	452,352	24,904	39,846
	Industrial	245,468	392,749	42,227	67,563	203,241	325,186
Subtotal Causeway		553,093	884,947	324,948	519,915	228,145	365,032
<i>Carrollton N. Station (S9)</i>	Commercial	293,769	419,670	183,421	385,696	110,348	33,974
	Industrial			-	-	-	-
Subtotal Carrollton N.		293,769	419,670	183,421	385,696	110,348	33,974

*Source: Computed by author
Note: Differences in Totals are a result of rounding*

Introduction

The development of a new 13-mile long light rail system from the Louis Armstrong International Airport to the Union Passenger Terminal in Downtown New Orleans, with additional stations in several locations in the Kenner, Metairie and New Orleans area will provide a broad array of benefits to the region. It could be expected that the light rail would ease some congestion on Interstate 10, provide for a cleaner environment with less air and noise pollution from automobiles, and provide tourists with an efficient way to get from the airport to downtown hotels. Significant economic impacts would accrue during the construction of the line, as it is likely that construction crews will be needed for many years to complete the project, and once operational, mechanics, engineers, security personnel and others will be needed. In addition to these impacts, there are numerous economic benefits that would accrue as induced by the location of station districts throughout the region, as it is expected that some redevelopment will take place in the surrounding areas of light rail depots. The Innovation Group was commissioned to analyze these induced benefits. Our analysis took into consideration three station locations and the induced development and subsequent economic impacts that each of these would generate. These locations are:

- S2: Williams Blvd. - The intersection of Williams Boulevard and Airline Drive
- S6: Causeway North - The intersection of Causeway Boulevard and Airline Drive
- S9: Carrollton North - The intersection of Carrollton Avenue and Tulane Avenue

The evaluation of the induced benefits that would arise from the development of light rail stations at each of these locations was based on several factors. Consideration was given to the surrounding land uses at each of the station sites, proposed areas for redevelopment and type of redevelopment as provided by Bechtel, and the ratio of this area for which the land is currently vacant. New job creation and new investment projections were developed based on historical Orleans Parish and Jefferson Parish ratios, using a methodology created by the authors of this report specifically for the purpose of deriving estimates. Research into previous analyses of these impacts did not reveal a uniform or preferred methodology for performing such projections.

To some degree, the level of development around each of the stations relates to the scale of development of the stations themselves. At the ends of the light rail line are major terminals – one being the airport and one being the existing Union Passenger Terminal train station in downtown New Orleans. While it would be necessary to develop the light rail infrastructure at the sites, both venues already have the capacity and ancillary amenities to support large volumes of pedestrian traffic. Two other station types are proposed for along the light rail line – regional/intermodal stations and local/neighborhood stations. The regional/intermodal stations are to be developed near major intersections, connecting to major bus routes, and will provide park and ride facilities. Causeway North would fall under this classification. Local/neighborhood stations are generally constrained with respect to the provision of park and ride facilities, but provide connections to local bus lines and serve

existing and planned communities. The Williams Boulevard station and Carrollton North would fall under this classification.

The future commercial development around the station sites can partly be determined by the current status of commercial operations in the immediate area, as well as the current zoning. The Airline Drive corridor is largely commercial-based, with low-rise retail dominating much of the route through Jefferson Parish. Within close proximity to Airline Drive are also residentially-zoned areas. Data was collected for traffic zones around each of the sites demonstrating the number of households in the areas, as well as the number of current jobs by industry working in each of these regions. Based on the projected business development in each of these areas, it was then possible to estimate the volume of job growth in the station districts.

In order to estimate all of the induced benefits that may be expected, and differentiate between gross and net jobs and investment in the region, it was necessary for The Innovation Group to develop methodologies to transform the input data of land areas and land use types into estimates of new businesses on those sites, and the resulting job creation. Following a brief introduction of the three station districts to be analyzed in this report, a description of these methodologies will be presented.

The methodologies for estimating these benefits are uniform across each of the station districts, and thus it is only necessary to present once. Following the methodology introduction, each step of the analysis will be presented, differentiating impacts that may be expected in Orleans and Jefferson Parish, and at each of the three station districts considered for analysis in this report. Summary impacts for each of the three station districts are presented collectively at the conclusion of the report. All figures presented in this report are in 2004 dollars. This may lead to a conservative estimate, though inflation in New Orleans is low, therefore this assumption should not invalidate the projections. It should be further noted that some of the jobs and investment projected in this analysis might be transferred from potential sites elsewhere in the greater New Orleans area. As it is assumed that sites in close proximity to stations will attract a premium to fair share of business development demand, it could reasonably be expected that this would mean that other areas might attain less than their fair share as a result. It is not expected, however, that a “zero-sum game” would result, as new businesses will be induced to open around the station districts, and some businesses may opt to locate near one of the stations rather than elsewhere in a broad regional area, not merely as an alternative to other parts of the metro area.

Discussion will also be presented regarding the impact that this development will have on property values around each of the station sites. Data was not available to demonstrate the gross property values or property taxes for any defined radius around any of the sites, though in previous analyses conducted by other authors nationwide on this issue a percentage growth rate was projected. A literature review and some historical data will be presented to support the property value growth rate estimate made in this report. This, together with the projected business investment that will be generated, will be used to define the impact on property values in each of the station districts.

Kenner Station District S2: Williams Boulevard

Station S2 is proposed to be located at the intersection of Williams Boulevard and Airline Drive, 0.5 miles east of the Airport Access Road from Airline Drive and approximately 12.5 miles west of the Union Passenger Terminal. The Williams Boulevard station is expected to attain demand from the local community and neighborhood residents, businesses, and walk-up patrons, and provide bus transfer connections to north-south Jefferson Transit (JeT) along Williams Boulevard to the Esplanade Mall.

The existing land uses in this area are to an extent limited by the proximity to the airport, as some of the vacant land and residences have been purchased by the airport for noise abatement purposes. This contributes to a projected decline in resident population, as will be discussed below. Other existing land uses in the area include airport-related businesses, light industrial, and a mix of neighborhood retail, churches and a school.

The Williams Boulevard station is expected to be of the local/residential variety, which would reflect a depot design, but with limited or no trackside amenity development specific to the light rail. Some commercial development in the area should be stimulated by the presence of the station, and by the incremental pedestrian traffic newly generated. A description of the demographics of the Williams Boulevard station district area is presented below.

Williams Boulevard Station District Demographics

The population within the traffic zones contained within a half-mile radius of the Williams Boulevard station district totaled 6,959 in 2000, with a total of 2,665 households. The population in this area is projected by the New Orleans Regional Planning Commission to decline to 5,494, or by an average annual rate of 1.56% through 2015.

Current Williams Boulevard Station District Employment

The total employment of persons working within the Williams Boulevard station district traffic zones totaled 5,167 in 2000. The employment base for this area is relatively broad, with manufacturing jobs comprising the largest amount of this employment with 890 jobs, or 17.2% of the total. The arts and entertainment industries accounted for 12.7%, or 655 jobs, while construction accounted for 619 jobs, or 12% of the total. The following table shows a breakdown of the area employment by industry.

Williams Boulevard Station District Current Employment by Industry

Industry	Jobs	% Of Total
Manufacturing	890	17.2%
Arts & Entertainment	655	12.7%
Construction	619	12.0%
Wholesale Trade	550	10.6%
Public Admin	454	8.8%
Transport	380	7.4%
Professional	375	7.3%
Finance	315	6.1%
Educational	295	5.7%
Other Services	265	5.1%
Retail Trade	225	4.4%
Information	89	1.7%
Agriculture	55	1.1%
Armed Services	0	0.0%
Total Employment	5,167	

Source: N.O. Regional Planning Commission

Proposed Williams Boulevard Station District Land Uses

Airline Drive east and west of the station, as well as Williams Boulevard south of the station (into the Rivertown district), are designated by Bechtel as areas for potential commercial revitalization. This region consists of both occupied and vacant land, with most of the vacant land being on the south side of Airline Drive. A large area for potential mixed-use development was identified north of Airline Drive on Williams Boulevard, with a western limit of the airport access roadway, though development on that site is limited in its potential by the fact that most of the land is owned by the airport and regulated in land use by its designation as a Runway Protection Zone. Light industrial business operations is anticipated in areas northwest of the Williams Boulevard station near the intersection of Airline Drive and the airport access road, as well as between Airline Drive and Kenner Avenue, between ¼ and ½ mile east of the station. A large free trade zone exists and is expected to be further developed south of Airline Drive west of the station, with some potential residential and neighborhood commercial development located in various locations throughout a ½ mile radius from the station.

Metairie Location Analysis: S6: Causeway North

Station S6 is proposed to be located at the intersection of Causeway Boulevard and Airline Drive, approximately 6 miles east of the airport entrance from Airline Drive and approximately 7 miles west of the Union Passenger Terminal. The Causeway North station is expected to be a major multi-modal station for regional service, providing links to north-south bus routes on Causeway Boulevard, and shuttle

services to nearby Ochsner Hospital. The station will also provide a major Park and Ride facility with a proposed 279 spaces.

The Causeway North station is expected to be of the regional/multimodal variety, potentially with moderate amenity development specific to the light rail station in addition to the large parking facility. The station is expected to stimulate the commercial development in the area, both existing and new, and support businesses along bus routes through which passengers could transfer. The current land uses around the station are varied, with significant resident population in addition to the commercial and industrial space. A description of the demographics of the Causeway North station district area is presented below.

Causeway North Station District Demographics

The population within the traffic zones contained within a half-mile radius of the Causeway North station district totaled 8,682 in 2000, with a total of 4,085 households, reflecting an area with relatively small average household sizes. The population in this area is projected by the Regional Planning Commission to decline to 8,299 by 2015, or by an average annual rate of 0.3%.

Current Causeway North Station District Employment

The total employment of persons working within the Causeway North station district traffic zones totaled 5,061 in 2000. The employment base for this area centers primarily around the wholesale and retail trade industries, though as can be seen from the following table, most all industry categories are well represented, with no single industry accounting for more than 14% of total employment.

Causeway North Station District Current Employment by Industry

Industry	Jobs	% Of total
Wholesale Trade	665	13.1%
Retail Trade	570	11.3%
Manufacturing	540	10.7%
Transport	520	10.3%
Construction	505	10.0%
Professional	495	9.8%
Public Admin	450	8.9%
Other Services	385	7.6%
Educational	294	5.8%
Finance	225	4.4%
Arts & Entertainment	215	4.2%
Agriculture	110	2.2%
Information	79	1.6%
Armed Forces	8	0.2%
Total Employment	5,061	100.0%

Source: N.O. Regional Planning Commission

Proposed Causeway North Station District Land Uses

Airline Drive west of the station, as well as Causeway Boulevard north of the station, are designated by Bechtel as areas for potential commercial revitalization. To the east of the station, south of Airline Drive, the land use is primarily industrial, occupied by the LaBarre Business Park. To the southwest of the station, between Airline Drive and Earhart Expressway, the land use is designated for mixed-use redevelopment, including residential and lodging. Some additional light industrial land is designated west of this mixed-use space. Most of the existing vacant land within ½ mile of the proposed Causeway North station is located west and south of the site in mixed use or light industrial space, with some vacant parcels in the business park to the east. A limited amount of space in the area designated for commercial redevelopment is currently vacant, though it may be expected that some improvements may be made at existing businesses if pedestrian volumes increase and new business developments in the area occur.

New Orleans Location Analysis: S9: Carrollton North

Station S9 is proposed to be located at the intersection of Carrollton Avenue and Loyola Avenue, near the end of Airline Drive and the junction of Interstate 10. The site is approximately 10 miles east of the airport entrance from Airline Drive and approximately 3 miles west of the Union Passenger Terminal. The Carrollton North station is expected to attain demand from the local community and neighborhood residents, businesses, and walk-up patrons, and provide bus transfer connections to Regional Transit Authority (RTA) bus lines throughout the city of New Orleans.

The Carrollton North station is expected to be of the regional/multimodal variety, potentially with moderate amenity development specific to the light rail station and RTA transfer facility. The station will serve both the Mid-City and University areas, including Xavier and Tulane, with proximity to the Canal Street and St. Charles streetcar lines considered in the multi-modal transit potential. The station is expected to stimulate the commercial development along Tulane Avenue and Carrollton Avenue. The current land uses around the station are varied, with significant resident population to the north, Xavier University to the south across I-10, and commercial zoning along Carrollton and Tulane. A description of the demographics of the Carrollton North station district area is presented below.

Carrollton North Station District Demographics

The population within the traffic zones contained within a half-mile radius of the Carrollton North station district totaled 10,355 in 2000, with a total of 3,860 households. The population in this area is projected by the Regional Planning Commission to experience annual growth of 0.41%, bringing the total population to 11,007 by 2015.

Current Carrollton North Station District Employment

The total employment of persons working within the Carrollton North station district traffic zones totaled 4,443 in 2000. The employment base for this area centers primarily around Xavier University, with nearly 36% of the jobs. Additionally, Xavier has an enrollment of approximately 3,900 students (approximately 3,100 of which are undergraduate, and 800 of which are graduate students), many of which commute to school and are not considered in any employment or resident demographics. According to the campus planning department, 32% of freshmen live off campus (out of a total of approximately 900 freshmen), and 73% of all undergraduates live off campus (which would reflect approximately 90% of non-freshmen). While the neighboring community is home to some of these students, many drive or take RTA buses to school from outside the immediate area. Campus police report that 1,779 parking decals were sold to undergraduates in 2003-2004 calendar year, and that freshman are not permitted to have cars on campus. It is therefore estimated that more than half of the Xavier students commute to school, with some students potentially benefiting from the development of the light rail station near the campus.

Carrollton North Station District Current Employment by Industry

Industry	Jobs	% Of total
Educational	1,595	35.9%
Professional	675	15.2%
Other Services	310	7.0%
Retail Trade	279	6.3%
Wholesale Trade	275	6.2%
Construction	269	6.1%
Transport	214	4.8%
Information	200	4.5%
Arts & Entertainment	195	4.4%
Manufacturing	189	4.3%
Finance	129	2.9%
Public Admin	69	1.6%
Agriculture	44	1.0%
Armed Forces	0	0.0%
Total Employment	4,443	100.0%

Source: N.O. Regional Planning Commission

Proposed Carrollton North Station District Land Uses

Station S9 would abut Interstate 10 to the south, with Xavier University opposite Interstate 10 from the station. The area planned for redevelopment is between Tulane Avenue and Interstate 10 east of Carrollton Avenue and west of Jefferson Davis Parkway, with some potential enhancements along Carrollton Avenue. A link to the Canal Street streetcar is also envisioned. There is not an abundance of vacant land available for new development in the station district, however some

beautification and new business development along Tulane Avenue should result from the light rail station development.

Aims and Objectives

The purpose of this analysis is to quantify the potential economic output that would result from the development of light rail stations at each of the three previously defined locations. The output is expressed in terms of the projected number of jobs that will be created at each site, the investment that will be brought to the area, the volume of business creation, and other meaningful changes in the economic well-being of each of the areas. The methodology created in order to perform this analysis is outlined below.

Methodology

The following is an outline of the methodology devised by the authors of this report to calculate the induced jobs and investment that each of the station districts will generate. The benefits actually are calculated in ranges, as data was available not only by land use type in the potential re-development areas, but also the ratios for which the land was currently vacant. Data was not available to define the viability of the existing businesses in the station districts for which the land was not defined as vacant, but for which re-development could be expected, or for which recent development or presently thriving businesses were present. In these cases, some new job creation, business development and investment may be expected, though the net amount is not possible to determine.

The following is a description of the methodology we developed for evaluating the economic benefits that would be induced as a result of the operation of Stations S2, S6 and S9 of the proposed New Orleans Light Rail System:

- Acquire Land Use data for Jefferson and Orleans Parish (Tables 1 and 3);
Sources: Jefferson Parish: Regional Planning Commission 2002
Orleans Parish: City Planning Commission 1999
- Acquire Employment Data for Jefferson and Orleans Corresponding to periods of land use data for each Parish (Tables 5 and 7);
Source: Louisiana Department of Labor
- Reconcile different categories for Land Use and Employment for commercial and industrial use (Tables 2, 4, 6, and 8);
- Divide Employment in each category by acreage of land use in that category to yield Jobs per Acre for each parish (Table 9);
- Compile Land Use data quantified in the Light Rail Study by Station (Tables 10 and 11);
Source: Bechtel Phase 2 Report
- Convert square footage of each station land use category to acreage (Tables 12 and 13);

- Multiply by appropriate Jobs Per Acre to yield Jobs Per Station for Allowable Building Area and current Vacant Parcels (Tables 14 and 15);
- Acquire data on historical construction projects for the period 1998-2003 in Jefferson and Orleans parishes, specifically detailing whether commercial or industrial, to yield total investment with permanent jobs created;
Source: Louisiana Department of Economic Development
 - Select appropriate sampling of projects held to represent station land usage (Tables 16 and 17);
 - Sum the projects in Industrial category for Jefferson and Orleans and divide by the permanent jobs created to yield investment per job in the Industrial category of land use;
 - Sum the projects in Commercial category for Jefferson and Orleans and divide by the permanent jobs created to yield investment per job in the Commercial category of land use;
- Multiply by Jobs Per Station to yield Investment Per Station for the total buildable land and the total vacant parcels (Tables 18 and 19);
- Acquire data on real estate vacancy absorption for 2002 to 2003 (Table 20);
Source: Ragas, Wade, (2004) New Orleans and South Central Gulf Real Estate Market Analysis, Real Estate Market Data Center, University of New Orleans.
 - Reconcile the available real estate data, Retail, Office and Warehouse, into appropriate land use categories: Commercial (Retail and Office) and Industrial (Warehouse);
 - Compound the base absorption rates to 2015 (Table 21);
- Analyze Kenner, Louisiana absorption rates during the early 1990's, a period of comparative prosperity, to estimate premiums to average parish-wide absorption rate (Table 22), and provide the compound premium absorption rates to 2015;
Source: Ragas, Wade, (1994) New Orleans and South Central Gulf Real Estate Market Analysis, Real Estate Market Data Center, University of New Orleans;
 - Multiply Premium Absorption Rates derived by the Jobs and Investment at Full Buildout for the Total Buildable Area and for the vacant areas to determine range of total jobs and investment at each district. (Tables 23 and 24);
 - Multiply Base and Development Case absorption rates by Developable areas in order to demonstrate potential range in development by square footage (Tables 25 and 26).

Station District Economic Analysis

The methodology outlined above is utilized in the analysis that follows. An introductory to the state of the Orleans Parish economy and the Jefferson Parish economy are presented initially in order to demonstrate the segmentation of employment and land uses in each of the parishes, and are further utilized to estimate the average number of jobs that are attributed to each segment of land use, as a major input to our calculations of the impact of the light rail development. The following is a description of the breakdown of jobs and land use square acreage in the two-parish area. As ratios differ considerably between the two parishes, the data is presented separately.

Parish-Wide Land Uses

Orleans Parish Land Use Summary

Data was collected from the New Orleans City Planning Commission that demonstrated the breakdown in acreage for each Planning District in Orleans Parish by land use type, with the most recent available data being 1999 (see Table 1). A total of 116,176 acres of land was identified in the parish, of which 40,040 acres were defined as 'Wetlands'. An additional 29,403 acres was defined as 'Parkland' or 'Unclassified'. Commercial and industrial land uses comprise a small minority of the total acreage in the parish, at just 15% of the total combined.

The ten defined land uses by the City Planning Commission are narrowed down to two categories as they relate to potential land uses in the New Orleans Light Rail Study. This total and its breakdown (shown in Table 2) are less than that which appears in Table 1, as it omits residential developments, wetlands and parklands. The omission is trivial for the purpose of this analysis, as the purpose of presenting these figures is ultimately to estimate the total number of jobs per acre that is attributable to each land use type in the parish. A negligible number of jobs are attributable to these land use types, and moreover, the one station district under consideration in this analysis in Orleans Parish, Carrollton North, contains neither parkland nor wetlands. Some employment could theoretically be attributed to residences, such as landscapers and housekeepers, however they are not identifiable as such through Louisiana Department of Labor data, and therefore the residential land use is not further considered.

Tables 1 and 2 follow demonstrating the broadly defined land uses in the Parish as defined by the New Orleans City Planning Commission, and our computations of the more narrowly defined land use types, as corresponding to definitions used Bechtel's presentations.

Jefferson Parish Land Use Summary

Data was collected from the Regional Planning Commission's 2003 Regional Comprehensive Plan that demonstrated the breakdown by acreage in Jefferson Parish by land use type, with the most recent available data being 2002 (see Table 3). A total of 51,960 acres of land was identified in the parish as part of the planning area, of which nearly 45%, or 23,288 acres was defined as 'Not in Use'. An additional 678 acres was defined as used for fishing, hunting, forestry and agriculture, none of which would be applicable to the station district areas under consideration. As is the case in Orleans Parish, commercial and industrial land uses comprise a small minority of the total acreage in the parish, at just 20% of the total combined, or 10,381 acres.

The ten defined land uses (a different ten from Orleans Parish) by the Regional Planning Commission are narrowed down to two categories as they relate to potential land uses in the New Orleans Light Rail Study. Table 4 considers the General Sales and Services category for commercial revitalization calculations, and Manufacturing, Wholesale Trade, Transportation, Communications, Utilities, Construction, Mining and Extraction Services for Industrial development calculations. The omission of other land use types is trivial for the purpose of this analysis, as no meaningful quantity or ratio of jobs would correspond.

Tables 3 and 4 follow demonstrating the broadly defined land uses in the Parish as defined by the Regional Planning Commission, and our computations of the more narrowly defined land use types, as corresponding to definitions used Bechtel's presentations.

Parish-Wide Employment Totals

Orleans Parish Employment Summary

Data was collected from the Louisiana Department of Labor that demonstrated the breakdown of employment by SIC Code sector for Orleans Parish, with data reflecting the 2nd Quarter of 1999 in order to correspond most closely to the timeframe presented in New Orleans City Planning Commission's land use data (see Table 5). A total of 259,019 jobs were reported in the parish at that time, with approximately 47% being in the Services sector, or 122,155 persons. Retail Trade was the second most common employment sector, reflecting 41,680 jobs, or 16% of the total.

The eleven SIC employment sectors were further narrowed to two sectors as they relate to categories defined in the Light Rail analysis - Commercial Revitalization and Industrial. The employment totals for these more narrowly-defined categories include all of the employment presented in the LA Department of Labor figures, less employment in the Agriculture and Public Administration industries. The total parish-wide employment in these industries is presented in Table 6.

Jefferson Parish Employment Summary

Data was collected from the Louisiana Department of Labor that demonstrated the breakdown of employment for Jefferson Parish for 2002 (see Table 7). This time frame corresponds to the data presented in Table 3 for the land use acreage by land use type. The LA Department of Labor provided different employment segmentation in 2002 relative to 1999 (the data necessary for use in analyzing Orleans Parish), however the reconciliation into the more narrow categories is equally straightforward. A total of 202,488 jobs were reported in Jefferson Parish during the 2nd Quarter of 2002, with employment covering a broad array of industries, and the most common employment sector, Retail Trade, reflecting 30,936 jobs, or only 15.3% of the total. The service industries in aggregate comprise a large percentage of the total, but are narrowly defined within the sector, ranging from healthcare and professional services to entertainment, accommodations, food services, and waste services.

The 20 employment sectors were further narrowed to the two categories defined in the Light Rail analysis - Commercial Revitalization and Industrial. The employment totals for these more narrowly-defined categories include all of the employment presented in the LA Department of Labor figures, less employment in the Agriculture industries. The total Jefferson Parish-wide employment in these industries as defined for the Commercial Revitalization and Industrial sectors is presented in Table 8.

Parish-wide Jobs per Acre

The calculation of parish-wide jobs per acre is performed in order to make projections of the new jobs that may be expected at each of the station districts, based on the potential acreage of development for industrial and commercial revitalization land parcels. A simple calculation is provided for both Orleans and Jefferson Parish, dividing the total jobs in each of these land use types by the total acreage in each of these land use types. The results are presented in Table 9 below. As may be expected, Orleans Parish has a slightly higher jobs-per-acre average than Jefferson Parish for commercial activities, as the urban developments generally provide for comparatively less green-space and parking, and more vertical construction than suburban areas. New Orleans is less intensively developed for industrial uses, explaining the lower jobs per acre for that category of land use.

The following table presents the calculations of the jobs per acre averages by land use type in each parish. The sums of the employment and acreage for each category come from the previous tables.

Table 1														
Land Use (Acres), Orleans Parish, 1999 by Planning Districts														
Planning District Nos.	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Residential-Single Family	0	106	446	116	742	2,389	121	91	3,634	595	207	2,338	2,213	12,998
Residential-Single/Two	84	1,456	2,654	1,911	1,319	675	1,657	917	1,054	-	1	959	-	12,687
Residential-Multifamily	8	130	21	241	25	50	194	-	583	197	-	570	-	2,019
Residential-Marine	-	-	-	-	-	-	-	-	-	23	1,348	-	-	1,371
Commercial	515	299	267	856	131	238	282	69	1,344	187	-	409	-	4,597
Industrial	46	485	342	524	3	158	1,080	140	3,203	2,634	378	272	84	9,349
Institutional	160	246	458	464	372	848	199	158	328	8	1	460	10	3,712
Wetland	-	-	-	-	-	-	-	-	1,634	5,202	32,304	220	680	40,040
Parkland	114	107	598	304	2,163	700	162	56	955	14,123	7,091	1,126	1,459	28,958
Unclassified	-	12	14	16	8	13	13	6	37	56	247	8	15	445
Total	927	2,841	4,800	4,432	4,763	5,071	3,708	1,437	12,772	23,025	41,577	6,362	4,461	116,176

Source: City Planning Commission, www.new-orleans.la.us
Note: Differences in Totals are a result of rounding

Table 2	
Land Use (Acres), Orleans Parish, by Light Rail Study Categories	
Study Categories	Acres
COMMERCIAL REVITALIZATION	8,309
INDUSTRIAL	9,349
TOTAL	17,658

Source: Computed by author.
Notes: Total not equal to Table 1 Total due to the omission of Residential, Wetland, Parkland and Unclassified categories. Differences in sums are a result of rounding. **Commercial Revitalization** includes Commercial and Institutional categories.

<i>Table 3</i>	
Land Use (Acres), Jefferson Parish, 2002	
Property Designation	Acres
Residential	17,613
General Sales and Service	3,277
Manufacturing and Wholesale Trade	2,511
Transportation, Communications and Utilities	468
Construction Related Business	403
Mining and Extraction Establishments	89
Education, Health Care and Other Institutional	1,938
Arts, Entertainment and Recreation	1,695
Fishing, Hunting, Forestry and Agriculture	678
Not in Use	23,288
Total	51,960

Source: Regional Planning Commission (2003), RPC Regional Comprehensive Plan, Jefferson Parish

Note: Differences in Totals are a result of rounding.

<i>Table 4</i>	
Land Use (Acres), Jefferson Parish, by Light Rail Study Categories	
Study Categories	Acres
COMMERCIAL REVITALIZATION	6,910
INDUSTRIAL	3,471
TOTAL	10,381

Source: Computed by author.

Notes: Total is not equal to Table 3 total due to the omission of Residential, Fishing, Hunting, Forestry and Agriculture and Not in Use designations. Differences in Totals are a result of rounding.

Commercial Revitalization includes General Sales and Service, Education, Healthcare and other Institutional, and Arts, Entertainment and Recreation designations. **Industrial** includes Manufacturing and Wholesale Trade, Transportation, Communications and Utilities, Construction Related Business and Mining and Extraction Establishments designations.

<i>Table 5</i>		
<i>Employment by Sector, Orleans Parish, 2nd Quarter 1999</i>		
Sector	Jobs	As % of Total
AGRICULTURE	865	0.3%
MINING	7,372	2.8%
CONSTRUCTION	7,212	2.8%
MANUFACTURING	13,278	5.1%
TRANSPORTATION	23,598	9.1%
WHOLESALE TRADE	11,319	4.4%
RETAIL TRADE	41,680	16.1%
FINANCE	14,242	5.5%
SERVICES	122,155	47.2%
PUBLIC ADMINISTRATION	17,298	6.7%
TOTAL	259,019	

Source: LA Department of Labor, www.laworks.net
Note: Differences in Totals are a result of rounding.

<i>Table 6</i>	
<i>Employment by Light Rail Categories Orleans Parish, 2nd Quarter 1999</i>	
Sector	Jobs
COMMERCIAL REVITALIZATION	195,375
INDUSTRIAL	62,779
TOTAL	258,154

Source: Computed by author.
Notes: Total not equal to Table 5 Total due to the omission of Agriculture sector.
Differences in Totals are a result of rounding. Commercial Revitalization includes Retail Trade, Finance, Public Administration and Services sectors. Industrial includes Mining, Construction, Manufacturing, Transportation and Wholesale Trade sectors.

<i>Table 7</i>		
<i>Employment by Sector, Jefferson Parish, 2nd Quarter 2002</i>		
Sector	Jobs	As % of Total
AGRICULTURE, FORESTRY, FISHING, & HUNTING	76	0.0%
MINING	2,622	1.3%
UTILITIES	1,506	0.7%
CONSTRUCTION	14,932	7.4%
MANUFACTURING	17,354	8.6%
WHOLESALE TRADE	14,332	7.1%
RETAIL TRADE	30,936	15.3%
TRANSPORTATION & WAREHOUSING	8,747	4.3%
INFORMATION	4,211	2.1%
FINANCE & INSURANCE	8,816	4.4%
REAL ESTATE, RENTAL & LEASING	4,746	2.3%
PROFESSIONAL & TECHNICAL SERVICES	9,923	4.9%
MGMT. OF COMPANIES & ENTERPRISES	2,081	1.0%
ADMINISTRATIVE AND WASTE SERVICES	16,363	8.1%
EDUCATIONAL SERVICES	*	
HEALTH CARE & SOCIAL ASSISTANCE	25,390	12.5%
ARTS ENTERTAINMENT & RECREATION	5,821	2.9%
ACCOMMODATION & FOOD SERVICES	21,064	10.4%
OTHER SERVICES (EXCEPT PUBLIC ADMIN)	6,839	3.4%
PUBLIC ADMINISTRATION	6,729	3.3%
TOTAL	202,488	

Source: LA Department of Labor, Notes: Due to unclassified and non-publishable data, major divisions may not total to parish employment. Differences in Totals are a result of rounding

Table 8	
Employment by Light Rail Categories, Jefferson Parish, 2nd Quarter 2002	
Sector	Jobs
COMMERCIAL REVITALIZATION	126,556
INDUSTRIAL	75,854
TOTAL	202,410

Source: Computed by author.

Notes: Total not equal to Table 7 Total due to the omission of Agriculture. Differences in sums are a result of rounding.

Commercial Revitalization includes Retail Trade, Information, Finance and Insurance, Real Estate and Rental and Leasing, Professional and Technical Services, Mgmt. of Companies and Enterprises, Educational Services, Health Care and Social Assistance, Arts, Entertainment and Recreation, Accommodation and Food Services, Other Services and Public Administration sectors. Industrial includes Mining, Utilities, Construction, Manufacturing, Wholesale Trade, Transportation and Warehousing, and Administrative and Waste Services sectors.

Table 9			
Jobs per Acre, Orleans Parish			
	Employment	Acreage	Jobs per Acre
COMMERCIAL REVITALIZATION	195,375	8,309	24
INDUSTRIAL	62,779	9,349	7
TOTAL	258,154	17,658	15
Jobs per Acre, Jefferson Parish			
	Employment	Acreage	Jobs per Acre
COMMERCIAL REVITALIZATION	126,556	6,910	18
INDUSTRIAL	75,854	3,471	22
TOTAL	202,410	10,381	19

Source: Computed by author.

Note: Differences in Totals are a result of rounding.

Potential Development by Land Use Category

In order to project the number of jobs that may be induced by development of each of the station districts, it is necessary to calculate the proposed building area for each land use type at each of the station districts. These calculations are based on Bechtel’s assumptions regarding the potential sites for improvements within a ½ mile radius of each of the station districts, and types of land use for which development or renovations may occur. For each of the station districts, these parcels were broken down by both land use type and status – considering allowable building areas and the percentages of which are currently vacant.

Tables 10 and 11 consider the allowable and vacant building areas by land use category and station district as classified according to our earlier light rail study categories, in order to reconcile with our estimates of jobs per acre per land use type. Tables 12 and 13 follow, provided in terms of acreage rather than square footage.

The square footage and acreage for development is reported with both a ‘low development’ and ‘high development’ total as per Bechtel’s Phase 2 report, reflecting the range in potential density of development per land area. For the Williams Boulevard station, it is estimated that between 201.8 and 256.3 acres of allowable building area are available within the defined impact area, of which between 33.5 and 43.1 acres are vacant, and may be available for new development. The Causeway North station and Carrollton North station have comparable allowable buildable areas (in the range of 53.8 to 86.0 acres), however Causeway North has approximately twice the vacant land – a range of 12.7 to 20.3 acres at Causeway, versus a range of 6.7 to 9.6 acres at Carrollton.

Potential Jobs Induced by Light Rail Stations

A simple calculation of jobs per acre of development per land use type (from Table 9) was applied to the acreage of land uses by type (as shown in Tables 12 and 13) in order to estimate the number of jobs that could be induced at each station district assuming full build-out, for both allowable land and vacant land. This provides a range in potential job creation, as some of the allowable, non-vacant land could potentially be re-developed, renovated, improved, or merely requires additional employees as additional pedestrian traffic and bus transfer traffic comes to the area.

It should further be noted that these figures assume full build-out and absorption by businesses, which should not be expected as an immediate result. Discussion of absorption rates will be presented later in this report.

In the Williams Boulevard station district it is estimated that between 3,948 and 5,011 jobs could be supported in the allowable building areas, of which approximately 60% would be in commercial revitalization, and 40% in industrial businesses. The vacant land in this area is limited primarily to commercial revitalization, as between 624 and 802 jobs would be in areas currently vacant, of which approximately 90% would be in commercial revitalization land use areas.

In the Causeway North station district it is estimated that between 1,029 and 1,646 jobs could be supported in the allowable building areas, of which approximately 56% would be in commercial revitalization, and 44% in industrial businesses. Between 252 and 404 jobs would be in areas currently vacant, of which there would be a roughly even split between the jobs in the industrial and the commercial revitalization land use areas.

In the Carrollton North station district it is estimated that between 1,369 and 1,956 jobs could be supported in the allowable building areas, all of which would be in commercial revitalization areas. Between 159 and 227 of these jobs would be in areas currently considered vacant.

The summary job calculations are provided in Tables 14 and 15.

New Commercial Investment and Industrial Development

The calculations provided above estimate the total number of new jobs that could potentially be generated in the three subject station districts as a result of the development of the light rail system and these stations. Based on data collected from the Louisiana Department of Economic Development, an estimate is made to determine the total new investment that may be made at each of these station districts for new and renovated businesses, further stimulating the local economies.

The methodology to estimate the new investment, as previously outlined, considers recent historical commercial and industrial investment in Orleans and Jefferson Parish, for which total investment amounts and job creation have been reported. As can be noted from the following tables (Table 16 and 17), a relatively broad variance is demonstrated between commercial and industrial projects, and the investment-job ratio differs significantly between parishes for industrial jobs (however, as noted, no new industrial development is envisioned in the Carrollton North station district). Additionally, it should be noted that industrial developments have comprised only a small percentage of total investment in both parishes during the past six years relative to commercial development.

New commercial developments in Orleans Parish and Jefferson Parish during the past six years have each provided for approximately 4,000 direct new jobs, though the investment on these new commercial developments was considerably higher in Jefferson than Orleans - \$46,515 per job in Jefferson versus \$32,551 in Orleans. More commercial land availability and lower land costs resulting in more spacious commercial space may explain this difference.

Projected Investment at Stations

The following tables (Table 18 and 19) present estimates of the total potential investment at the three station districts, both on the total allowable buildable land and the total vacant buildable land, for the range of high and low development. It should be noted that these totals reflect full build-out of the available land as

proposed in the Phase 2 report. These totals are calculated by multiplying the estimated total jobs at full buildout (from Tables 14 and 15) by the investment per job estimates derived for commercial and industrial projects in each parish (as shown in Tables 16 and 17).

Table 18 demonstrates that for the allowable buildable areas, potential investment at Williams Boulevard station district could be in the range of \$247 to \$313 million. For vacant land only, this total falls in the range of \$31 to \$40 million. At the Causeway North station district, the potential investment at full buildout for all allowable buildable areas is estimated to be in the range of \$68 to \$109 million, of which \$17 to \$27 million would be on currently vacant parcels. Finally, total investment at full buildout for all allowable lands at the Carrollton North station district is estimated at \$45 to \$64 million, with approximately \$5 to \$7 million of this total pertaining to the vacant parcels.

New Development Absorption Rates

Development up to the full build-out optimally should be done based on the feasibility of development, and the demand for these new businesses. The New Orleans area has experienced a population decline over the past several decades, and is expected to continue to experience a population decline. As noted in the description of the three station sites, the area around the proposed Williams Boulevard station is expected to experience a significant population decline, while the area around the proposed Carrollton North station is expected to experience only a small population gain through 2015. Independent of light rail development, new commercial development in these areas, as with much of the greater New Orleans area, may not be warranted.

	Station	Pop. 2000	Pop. 2015	% Change	Annual % Change
S2	Williams	6,959	5,494	-21.1%	-1.56%
S6	Causeway	8,682	8,299	-4.4%	-0.30%
S9	Carrollton	10,355	11,007	6.3%	0.41%

Source: New Orleans Regional Planning Commission

Absorption rate:

$$\frac{\text{change in total leased space}}{\text{total new leasable space}}$$

For Orleans and Jefferson Parish we looked at absorption rates to determine the degree at which existing and new space for commercial and industrial activities get absorbed by tenants. The formula used to calculate absorption rates is the total change in total leased space divided by the total amount of space available for lease (including that which is leased and that which is available for lease but vacant). In Orleans Parish the absorption rate for retail and warehouse space has been relatively high during the past several years, as compared to Jefferson Parish, though in neither parish is absorption high enough to support mass regional business development. Independent of the surroundings, these figures demonstrate that between 0.1% and 3.7% of commercial and industrial space was absorbed in Orleans and Jefferson Parish in 2003.

These rates are parish-wide averages, and may not reflect that which would be expected near the stations, as these sites may be considered premiums to the average site parish-wide; however the premium advantage will be addressed in a later section.

Table 20 provides data from an annual report generated by University of New Orleans' Real Estate Data Center. Table 21 relates the categories provided in Table 20 to the land use types considered elsewhere in this analysis for the purpose of further computations, with absorption rates compounded to the year 2015.

Projected Premium to Parish-Wide Absorption Rates

Real estate, both commercial and residential, generally has higher appeal in areas of growing economic prosperity. Commercial feasibility for retail businesses is generally a function of a traffic intercept component and a local population base. With the development of the light rail stations, incremental traffic past the sites can be expected, especially with respect to pedestrian traffic. In theory, this should support the viability of new retail ventures. A premium to the parish-wide average absorption rate should therefore be considered in order to estimate the rate at which the new commercial and industrial space may be demanded.

In the greater New Orleans area, the best parallel to a reasonable premium to absorption can be found in the growth of the city of Kenner, with significant growth during the 1980's, and sustained periods of growth at a premium rate during the early 1990's. Growth rates for the Kenner region were collected for the period 1993-1994, a period in which there was also growth in previous and subsequent years, but reflective of a period of the greatest growth during the decade. Retail absorption rates in the area were over 8% during that period, with office space absorption at 3.4%. These figures are well above that which is currently attained in Orleans Parish and Jefferson Parish, and may be more indicative of how the economies immediately surrounding the station districts may fare.

Compounding the growth rates through 2015, it is estimated that over 62% of the commercial space in the Carrollton station district could be absorbed, while nearly 92% of the commercial space in the Jefferson Parish station districts could be absorbed. Industrial space has a significantly lower absorption rate than commercial space, at only 17.2%, though still at a premium to regional averages.

Development Forecast Conclusions

Tables 23 and 24 demonstrate the projected investment and job creation at the three station districts considered in this analysis. Totals are presented in terms of the total buildable areas and the total vacant areas. While it is recognized that there is a considerable difference between the buildable and vacant totals, it is necessary to present the range, as many of the non-vacant spaces are currently under-utilized and/or understaffed relative to the potential future demand for services and businesses around the stations.

At station district S2, Williams Boulevard, it is estimated that between 2,464 and 3,141 jobs could be provided in the allowable building areas, of which between 528 and 679 jobs would be at currently vacant properties. This is not an aggressive growth projection, as there are currently 5,167 persons employed in the station district area, as demonstrated in the instruction to this report. The total new investment potential on the vacant sites is estimated to be in the range of \$25 to \$32 million, and could fall in the range of \$125 to \$160 million when considering all allowable building areas. Tables 25 and 26 demonstrate the total development of vacant parcels, using both the absorption rate calculations in the base case and the premium rate assumptions. For the Williams Boulevard station district it is estimated that between 200,000 and 257,000 square feet of vacant space could be absorbed by 2015 assuming no premium to absorption lease rates, whereas between 1.25 and 1.61 million square feet of space could be absorbed if businesses recognize the premium that the light rail station should provide.

At station district S6, Causeway North, it is estimated that between 626 and 1,001 jobs could be provided in the allowable building areas, of which between 140 and 224 jobs would be at currently vacant properties. The total new investment potential on the vacant sites is estimated to be in the range of \$7 to \$12 million, and could fall in the range of \$32 to \$52 million when considering all allowable building areas. It is estimated that between 48,000 and 77,000 square feet of vacant space could be absorbed by 2015 assuming no premium to absorption lease rates, whereas between 325,000 and 520,000 square feet of space could be absorbed if businesses recognize the premium that the Causeway North regional/multimodal light rail should provide.

At station district S9, Carrollton North, it is estimated that between 855 and 1,221 jobs could be provided in the allowable building areas, of which between 99 and 141 jobs would be at currently vacant properties. The total new investment potential on the vacant sites is estimated to be in the range of \$3 to \$5 million, and could fall in the range of \$28 to \$40 million when considering all allowable building areas. For the Carrollton North station district it is estimated that between 33,000 and 47,000 square feet of vacant space could be absorbed by 2015 assuming no premium to absorption lease rates, whereas between 183,000 and 386,000 square feet of space could be absorbed if businesses recognize the premium that the light rail station should provide.

It should be recognized that this analysis examines the impact that the LRT station districts would have on job and business creation, but is limited in its scope in that it examines the potential increased demand, but is not expansive on the types of businesses that may be induced, or whether the growth would primarily relate to expansion of existing businesses or attraction of new businesses. A more macro investigation, one that would be worthy to consider in future efforts, would attempt to discern the types of businesses and the types of developments that would occur at each station district, as an expansion of the job, spending and industry estimates provided herein. Therefore, the conclusions drawn in this analysis should be viewed as a first step in a more comprehensive effort.

Property Value Enhancements

There is no consensus for how property values have changed around light rail station districts elsewhere in the United States, as it is not possible to hold all other factors constant. In some cases, widespread infrastructure improvements have occurred in cities, where interstate off-ramps were newly developed parallel or perpendicular to stations, and development around these stations were equally attributable to highway intercepts as they were to passenger intercepts. Additionally, the range in the volume of new pedestrian flows coming from different stations has yielded an equally broad level of new commercial development, which in some cases has notably increased the popularity of neighborhoods, driving up property values.

Other issues that could make it difficult to accurately assess the impact of light rail operations on property values is that it is necessary to consider change over several years, as expectations of light rail convenience and commercial revitalization can support real estate prices, even before development occurs. It is also difficult to define a boundary for which properties may be proximate enough to light rail stations to be considered as part of a sample, or to find a large enough representative sample to be statistically significant.

In summary, while we have examined multiple analyses of light rail networks and their impacts on property values, there have been a nearly equal number of rebuttals explaining the weakness of the authors' arguments. The greatest parallel to our study was performed by Wilbur /Smith Associates/BRW Erdman Anthony Fisher Associates in March 1998, the *Rochester Light Rail Economic Development Feasibility Study*. Their conclusions showed that property values increased by in excess of 6% relative to properties located further away, absorption rates for leasable space were higher than for properties elsewhere in the region, and vacancy rates were lower. Other studies, such as one prepared by HLB Decision Economics for the Cincinnati market, have shown property rate premiums of over 7% at the most highly utilized station districts, but limited premiums of less than 2% around the neighborhood stations. These changes were projected over a 30-year period, limiting the differentiability between properties near and away from the stations. Given that none of the three stations considered in this analysis are major terminals, it could be expected that the property value growth rates around the three subject stations would exceed the New Orleans market averages over the next two decades, though the premium should be less than 5%.

<i>Table 10</i>							
<i>Allowable Buildable Areas at Stations by Land Use Category (ft²)</i>							
<i>Light Rail Study Categories</i>		Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
		<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	Commercial Revitalization	1,307,754	1,631,304	1,003,707	1,605,930	890,934	1,272,763
	Mixed Use Redevelopment (Residential, Commercial, Office)	3,699,507	4,756,509	347,317	555,708	939,692	1,342,418
	Residential/Lodging	263,969	339,389	60,557	96,890		
	Neighborhood Commercial Revitalization						
	Public, Education, Hospital	411,803	529,461			706,082	1,008,688
INDUSTRIAL	Industrial	609,908	784,167	930,106	1,488,170		
	Free Trade Zone	2,497,463	3,121,829				
TOTAL		8,790,404	11,162,659	2,341,687	3,746,698	2,536,708	3,623,869

Source: Bechtel Infrastructure Corporation (2004), New Orleans Light Rail Transit Project, Transit-Oriented Development Policy Workshop.

<i>Table 11</i>							
<i>Vacant Land at Stations by Land Use Category (ft²)</i>							
<i>Light Rail Study Categories</i>		Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
		<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	Commercial Revitalization	177,731	228,511	97,593	156,148	118,458	169,226
	Mixed Use Redevelopment (Residential, Commercial, Office)	1,014,481	1,304,333	210,032	336,050	121,160	173,085
	Residential/Lodging	146,393	188,220				
	Neighborhood Commercial Revitalization					54,151	77,359
	Public, Education, Hospital						
INDUSTRIAL	Industrial	121,594	156,335	245,468	392,749		
	Free Trade Zone						
TOTAL		1,460,199	1,877,399	553,093	884,947	293,769	419,670

Source: Bechtel Infrastructure Corporation (2004), New Orleans Light Rail Transit Project, Transit-Oriented Development Policy Workshop.

Table 12							
Allowable Buildable Areas at Stations by Land Use Category (Acres)							
<i>Light Rail Study Categories</i>		Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
		<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	Commercial Revitalization	30.0	37.4	23.0	36.9	20.5	29.2
	Mixed Use Redevelopment (Residential, Commercial, Office)	84.9	109.2	8.0	12.8	21.6	30.8
	Residential/Lodging	6.1	7.8	1.4	2.2		
	Neighborhood Commercial Revitalization						
	Public, Education, Hospital	9.5	12.2			16.2	23.2
INDUSTRIAL	Industrial	14.0	18.0	21.4	34.2		
	Free Trade Zone	57.3	71.7				
TOTAL		201.8	256.3	53.8	86.0	58.2	83.2

*Source: Computed by author.
Note: Differences in Totals are a result of rounding.*

Table 13							
Vacant Land at Stations by Land Use Category (Acres)							
<i>Light Rail Study Categories</i>		Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
		<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	Commercial Revitalization	4.1	5.2	2.2	3.6	2.7	3.9
	Mixed Use Redevelopment (Residential, Commercial, Office)	23.3	29.9	4.8	7.7	2.8	4.0
	Residential/Lodging	3.4	4.3				
	Neighborhood Commercial Revitalization					1.2	1.8
	Public, Education, Hospital						
INDUSTRIAL	Industrial	2.8	3.6	5.6	9.0		
	Free Trade Zone						
TOTAL		33.5	43.1	12.7	20.3	6.7	9.6

*Source: Computed by author.
Note: Differences in Totals are a result of rounding.*

Table 14						
Projected Jobs at Stations, Allowable Building Area at Total Build-out						
<i>Light Rail Study Categories</i>	Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	2,389	3,051	594	950	1,369	1,956
INDUSTRIAL	1,559	1,960	467	747	0	0
TOTAL	3,948	5,011	1,060	1,696	1,369	1,956

Table 15						
Projected Jobs at Stations, Vacant Land at Total Build-out						
<i>Light Rail Study Categories</i>	Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	563	724	129	207	159	227
INDUSTRIAL	61	78	123	197	0	0
TOTAL	624	802	252	404	159	227

*Source: Computed by author.
Note: Differences in Totals are a result of rounding.*

Table 16																								
Investments, Orleans Parish																								
<i>Commercial</i>																								
Year	1998				1999				2000				2001				2002				2003			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Jobs	0	120	22	38	101	191	12	69	216	30	82	213	102	800	73	109	45	463	458	46	82	127	73	459
Investment (Thousands)	0	2540	625	1987	3873	4466	765	1805	4020	1100	6590	12238	2195	23555	990	1685	2982	14760	7569	1070	2745	3985	5427	20985
TOTAL	<i>Jobs</i>				3,931				<i>Average Dollars Per Job</i>				\$32,551											
	<i>Investment</i>				\$127,957,000																			
<i>Industrial</i>																								
Year	1998				1999				2000				2001				2002				2003			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Jobs	35	0	0	20	0	0	20	0	0	53	0	0	5	0	0	0	0	320	0	0	0	20	25	0
Investment (Thousands)	846	0	0	1000	0	0	1000	0	0	1050	0	0	820	0	0	0	0	9000	0	0	0	704	825	0
TOTAL	<i>Jobs</i>				498				<i>Average Dollars Per Job</i>				\$30,612											
	<i>Investment</i>				\$15,245,000																			

Source: Louisiana Department of Economic Development, www.lded.state.la.us; totals computed by author.
Note: Differences in Totals are a result of rounding.

Table 17																								
Investments, Jefferson Parish																								
Commercial																								
Year	1998				1999				2000				2001				2002				2003			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Jobs	45	50	5	55	251	90	220	368	20	107	285	3	150	806	144	401	435	17	164	45	77	21	82	252
Investment (Thousands)	2833	5300	225	7260	9373	4297	24110	10708	665	2611	14831	120	4849	6085	6347	13570	27229	2217	16310	1375	16035	445	2352	11238
TOTAL	Jobs				4093				Average Dollars Per Job				\$46,515											
	Investment				\$190,385,000																			
Industrial																								
Year	1998				1999				2000				2001				2002				2003			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Jobs	23	25	12	85	25	0	5	0	11	0	0	10	0	48	0	15	9	9	0	35	0	80	0	0
Investment (Thousands)	1490	5700	1140	10750	345	0	450	0	1450	0	0	1500	0	1425	0	300	419	1799	0	3250	0	4200	0	0
TOTAL	Jobs				392				Average Dollars Per Job				\$87,291											
	Investment				\$34,218,000																			

*Source: Louisiana Department of Economic Development, www.lded.state.la.us; totals computed by author.
Note: Differences in Totals are a result of rounding*

Table 18						
Investment at Stations, Allowable Building Area - Full Build Out						
<i>Light Rail Study Categories</i>	Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	\$111,144,502	\$141,920,378	\$27,606,644	\$44,170,599	\$44,572,177	\$63,674,546
INDUSTRIAL	\$136,081,054	\$171,055,228	\$40,732,119	\$65,171,408	-	-
TOTAL	\$247,225,556	\$312,975,606	\$68,338,763	\$109,342,006	\$44,572,177	\$63,674,546

*Source: Computed by author.
Note: Differences in Totals are a result of rounding.*

Table 19						
Investment at Stations, Vacant Parcels - Full Build Out						
<i>Light Rail Study Categories</i>	Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	\$26,179,434	\$33,659,280	\$6,016,299	\$9,626,040	\$5,161,778	\$7,373,969
INDUSTRIAL	\$5,324,964	\$6,846,376	\$10,749,777	\$17,199,651	-	-
TOTAL	\$31,504,398	\$40,505,657	\$16,766,076	\$26,825,691	\$5,161,778	\$7,373,969

*Source: Computed by author.
Note: Differences in Totals are a result of rounding.*

<i>Table 20</i>		
<i>Absorption Rates for Retail, Office and Warehouse Real Estate, 2002 - 2003</i>		
<i>Parish</i>	<i>Category</i>	<i>Absorption (%)</i>
<i>Orleans</i>	Retail	3.00%
	Office	0.10%
	Warehouse	3.70%
<i>Jefferson</i>	Retail	1.80%
	Office	0.40%
	Warehouse	0.10%

Source: Ragas, Wade, (2004) New Orleans and South Central Gulf Real Estate Market Analysis, Real Estate Market Data Center, University of New Orleans.

<i>Table 21</i>		
<i>Projected Absorption Percentage by Land Use Category, 2015 (Base Case)</i>		
<i>Parish</i>	<i>Category</i>	<i>Absorption (%)</i>
<i>Orleans</i>	Commercial	11.22%
	Industrial	43.81%
<i>Jefferson</i>	Commercial	14.84%
	Industrial	1.00%

Source: Computed by author.

Note: Weighted Average Retail and Office data taken to be **Commercial** and Warehouse is taken to be **Industrial**.

<i>Table 22</i>				
Absorption rates for Retail, Office and Warehouse Real Estate, Kenner, LA 1993-1994		Projected Absorption Percentage by Land Use Category, 2015		
Category	Absorption (%)	(Development Case)		
Retail	8.10%	Parish	Category	Absorption (%)
Office	3.40%	Orleans	Commercial	62.44%
Warehouse	1.60%	Orleans	Industrial	17.20%
Note: Kenner absorption rates are taken to represent the projected absorption for both Orleans and Jefferson Parishes.		Jefferson	Commercial	91.90%
		Jefferson	Industrial	17.20%

Source: Ragas, Wade, (1994) *New Orleans and South Central Gulf Real Estate Market Analysis*, Real Estate Market Data Center, University of New Orleans; projections computed by author.

Notes: Weighted Average Retail and Office data taken to be **Commercial** and Warehouse is taken to be **Industrial**.

Projected absorption rates are based on absorption rates for Real Estate in Kenner, LA (1993-1994).
Differences in Totals are a result of rounding.

Table 23						
Investment and Jobs at Stations, Allowable Building Area						
Development Scenario						
INVESTMENT	Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
<i>Light Rail Study Categories</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	\$102,146,784	\$130,431,195	\$25,371,744	\$40,594,762	\$27,829,597	\$39,756,572
INDUSTRIAL	\$23,409,418	\$29,425,870	\$7,006,965	\$11,211,147	-	-
TOTAL	\$125,556,202	\$159,857,065	\$32,378,709	\$51,805,909	\$27,829,597	\$39,756,572
JOBS						
COMMERCIAL REVITALIZATION	2,196	2,804	545	873	855	1,221
INDUSTRIAL	268	337	80	128	-	-
TOTAL	2,464	3,141	626	1,001	855	1,221

Table 24						
Investment and Jobs at Stations, Vacant Parcels						
Development Scenario						
INVESTMENT	Williams Station (S2)		Causeway Station (S6)		Carrollton Station (S9)	
<i>Light Rail Study Categories</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
COMMERCIAL REVITALIZATION	\$24,060,074	\$30,934,389	\$5,529,249	\$8,846,762	\$3,222,867	\$4,604,096
INDUSTRIAL	\$916,030	\$1,177,752	\$1,849,236	\$2,958,780	-	-
TOTAL	\$24,976,104	\$32,112,140	\$7,378,485	\$11,805,542	\$3,222,867	\$4,604,096
JOBS						
COMMERCIAL REVITALIZATION	517	665	119	190	99	141
INDUSTRIAL	10	13	21	34	-	-
TOTAL	528	679	140	224	99	141

*Source: Computed by author.
Note: Differences in Totals are a result of rounding.*

<i>Table 25</i>							
Projected Absorption of Vacant Building Area, Stations, 2015							
(Base Case)							
Station	Category	Vacant Building Area (ft ²)		Absorption (ft ²)		Remaining Vacant Land (ft ²)	
		<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
<i>Williams Station (S2)</i>	Commercial	1,338,605	1,721,064	198,681	255,447	1,139,924	1,465,617
	Industrial	121,594	156,335	1,221	1,570	120,373	154,765
Subtotal Williams		1,460,199	1,877,399	199,902	257,018	1,260,297	1,620,381
<i>Causeway Station (S6)</i>	Commercial	307,625	492,198	45,659	73,054	261,966	419,144
	Industrial	245,468	392,749	2,466	3,945	243,002	388,804
Subtotal Causeway		553,093	884,947	48,125	76,999	504,968	807,948
<i>Carrollton N. Station (S9)</i>	Commercial	293,769	419,670	32,966	47,094	260,803	372,576
	Industrial	-	-	-	-	-	-
Subtotal Carrollton N.		293,769	419,670	32,966	47,094	260,803	372,576

Source: Computed by author.
Note: Differences in Totals are a result of rounding

<i>Table 26</i>							
Projected Absorption of Vacant Building Area, Stations, 2015 (Development Case)							
Station	Category	Vacant Building Area (ft ²)		Absorption (ft ²)		Remaining Vacant Land (ft ²)	
		<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>	<i>Low Development</i>	<i>High Development</i>
<i>Williams Station (S2)</i>	Commercial	1,338,605	1,721,064	1,230,238	1,581,735	108,367	139,329
	Industrial	121,594	156,335	20,917	26,894	100,677	129,441
Subtotal Williams		1,460,199	1,877,399	1,251,155	1,608,629	209,044	268,770
<i>Causeway Station (S6)</i>	Commercial	307,625	492,198	282,721	452,352	24,904	39,846
	Industrial	245,468	392,749	42,227	67,563	203,241	325,186
Subtotal Causeway		553,093	884,947	324,948	519,915	228,145	365,032
<i>Carrollton N. Station (S9)</i>	Commercial	293,769	419,670	183,421	385,696	110,348	33,974
	Industrial			-	-	-	-
Subtotal Carrollton N.		293,769	419,670	183,421	385,696	110,348	33,974

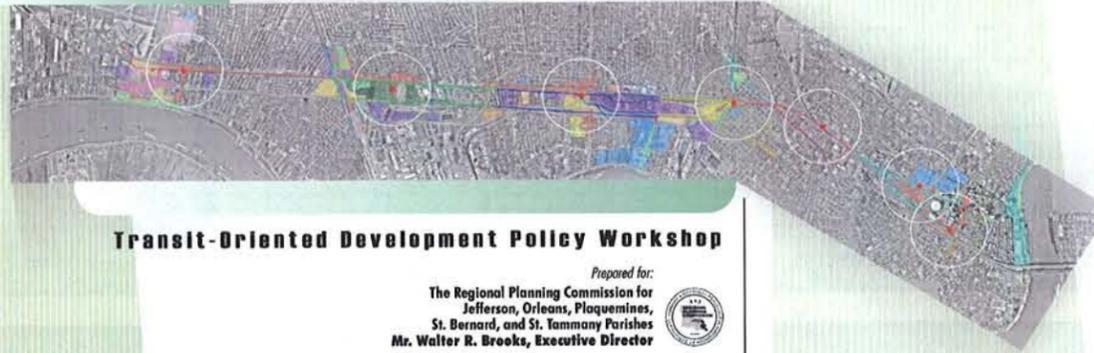
*Source: Computed by author
Note: Differences in Totals are a result of rounding*

Appendix F

Transit-Oriented Development Policy Workshop, February 2004

Concepts for Transit-Oriented Development

New Orleans Light Rail Transit Project



Transit-Oriented Development Policy Workshop

Prepared for:
The Regional Planning Commission for
Jefferson, Orleans, Plaquemines,
St. Bernard, and St. Tammany Parishes
Mr. Walter R. Brooks, Executive Director

Prepared by:
Bechtel Infrastructure Corporation

In association with
Urban Planning & Innovations, Co.

February 27, 2004

**New Orleans Light Rail Transit Project
Transit Oriented Development (TOD)
Workshop Meeting Agenda**

February 27, 2004 – 9 AM
Regional Planning Commission

The workshop meeting is conducted to present and discuss the elements of TOD policies and their applicability in the East-West corridor. The purpose is to involve representatives from the New Orleans City Planning Commission, the Jefferson Parish Planning Department, the City of New Orleans Mayor's Office of Economic Development, the Jefferson Economic Development Commission, the City of Kenner Planning Department, and the Kenner Economic Development Corporation, in station area planning for the LRT corridor as well as the development of a regional policy plan for transit oriented development.

1. Introduction
 - a. Status report on TOD Policy Plan
 - b. Status/schedule of economic benefits analysis
2. TOD Experience Profiles
3. Developing Policy Plan Framework
 - a. Elements of TOD policy versus current planning policies
 - b. Open discussion

Handouts:

For Each Station District

- Concept Plans
- Available Vacant Parcels Within Concept Plans
- Summary of Areas by Land Use Category

Table 1.1. Selected Summary of Transit-Oriented Development and Station Area Development Experiences

Table 2.1. Application of Transit-Oriented Development Policies in the New Orleans Region

Table 3.1. Summary of Current Local Planning Efforts

Note:

The following three summary tables and concept plans were the focus of discussions at the workshop meeting and were direct input to the economic analysis presented in Appendix E.

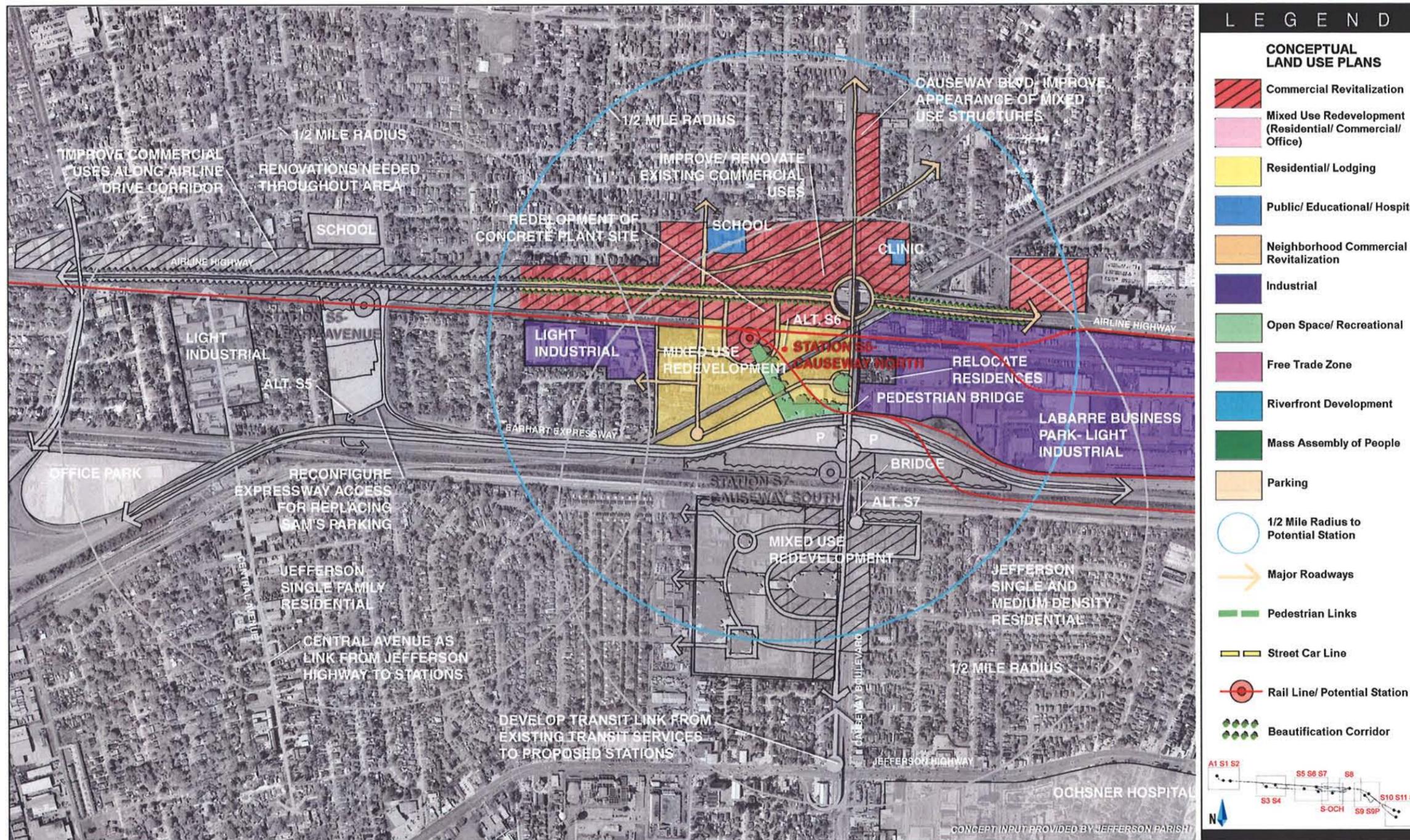
The TOD concept plans for the three selected station districts, and twelve others, are documented in the Phase-2 study report: **Concepts for Transit-Oriented Development, New Orleans Light Rail Transit Project, January 2003, prepared for the Regional Planning Commission, Prepared by Bechtel Infrastructure Corporation.**

Summary of Development Potential – Based on TOD Concept Plans

Station District S2 (in sq ft)- Potential Building Activity Worksheet for Preliminary Economic Analysis											
		Conceptual Land Use Plan Areas (Gross Area)				Vacant Parcels within Conceptual Land Uses Areas (Net Area)					
Land Use Type	Code	Allowable Building Area: Low Development	Floor Area Low Ratio (FAR)	Allowable Building Area: High Development	Floor Area HighRatio (FAR)	Vacant Parcels Area within Concept Land Use	Allowable Building Area: Low Development	Floor Area Low Ratio (FAR)	Allowable Building Area: High Development	Floor Area HighRatio (FAR)	
Commercial Revitalization	CR	1,307,754	0.70	1,631,304	0.90	253,901	177,731	0.70	228,511	0.90	
Mixed- Use Redevelopment	MU	3,699,507	0.70	4,756,509	0.90	1,449,259	1,014,481	0.70	1,304,333	0.90	
Residential/ Lodging	R	263,969	0.70	339,389	0.90	209,133	146,393	0.70	188,220	0.90	
Public, Education, Hospital	P/I	411,803	0.70	529,461	0.90	-	-	0.70	-	0.90	
Industrial	IN	609,908	0.70	784,167	0.90	173,705	121,594	0.70	156,335	0.90	
Free Trade Zone	FZ	2,497,463	0.80	3,121,829	1.00	-	-	0.80	-	1.00	
Parking	P		0.70		0.90	97,304	68,113	0.70	87,574	0.90	
Unclassified	UC					908,588	-		-		
Totals		8,790,404		11,162,659		3,091,890	1,528,311		1,964,972		

Station District S6 (in sq ft)- Potential Building Activity Worksheet for Preliminary Economic Analysis											
		Conceptual Land Use Plan Areas (Gross Area)				Vacant Parcels within Conceptual Land Uses Areas (Net Area)					
Land Use Type	Code	Allowable Building Area: Low Development	Floor Area Low Ratio (FAR)	Allowable Building Area: High Development	Floor Area HighRatio (FAR)	Vacant Parcels Area within Concept Land Use	Allowable Building Area: Low Development	Floor Area Low Ratio (FAR)	Allowable Building Area: High Development	Floor Area HighRatio (FAR)	
Commercial Revitalization	CR	1,003,707	0.50	1,605,930	0.80	195,185	97,593	0.50	156,148	0.80	
Residential/ Lodging	R	347,317	0.50	555,708	0.80	420,063	210,032	0.50	336,050	0.80	
Public, Education, Hospital	P/I	60,557	0.50	96,890	0.80	-	-	0.50	-	0.80	
Industrial	IN	930,106	0.50	1,488,170	0.80	490,936	245,468	0.50	392,749	0.80	
Unclassified	UC					247,553					
Totals		2,341,687		3,746,698		1,353,737	553,092		884,947		

Station District S9 (in sq ft)- Potential Building Activity Worksheet for Preliminary Economic Analysis											
		Conceptual Land Use Plan Areas (Gross Area)				Vacant Parcels within Conceptual Land Uses Areas (Net Area)					
Land Use Type	Code	Allowable Building Area: Low Development	Floor Area Low Ratio (FAR)	Allowable Building Area: High Development	Floor Area HighRatio (FAR)	Vacant Parcels Area within Concept Land Use	Allowable Building Area: Low Development	Floor Area Low Ratio (FAR)	Allowable Building Area: High Development	Floor Area HighRatio (FAR)	
Commercial Revitalization	CR	885,936	0.70	1,265,623	1.00	169,226	118,458	0.70	169,226	1.00	
Mixed- Use Redevelopment	MU	939,692	0.70	1,342,418	1.00	173,085	121,160	0.70	173,085	1.00	
Neighborhood Commercial Revitalization	NCR	706,082	0.70	1,008,688	1.00	77,359	54,151	0.70	77,359	1.00	
Open Space	OS	4,998	0.70	7,140	1.00	-	-	0.70	-	1.00	
Unclassified	UC					398,859					
Totals		2,536,708		3,623,869		818,529	293,769		419,670		



STATION S6- CAUSEWAY NORTH: CONCEPTUAL LAND USE PLAN (Figure 5.28)

New Orleans Area Light Rail Transit Project



STATION S9- CARROLLTON NORTH: CONCEPTUAL LAND USE PLAN (Figure 5.44)

New Orleans Area Light Rail Transit Project

