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16. Abstract <p>Over the years, the Palm Center (PC) in Houston, Texas, has been the beneficiary of several economic development endeavors designed to ignite economic and community growth and revitalization. While these endeavors brought forth initial success, they have failed to transform the PC into a lasting model of economic growth and prosperity and to inspire community pride and engagement. The development of METRO's Southeast Line light rail station at the Palm Center Transit Center presents the prime opportunity for meeting the needs of the community by implementing design concepts and principles that provide social, environmental, and economic benefits to those living within close proximity of the transit station.</p> <p>The objective of this study is to explore community partnerships and initiatives, Transit Oriented Development (TOD) and livable center concepts and principles, features from previously successful TODs, and lessons learned from past development initiatives designed to foster revitalization. The information gathered will be synthesized and presented as recommendations to help ensure the PC area reaches its full social, environmental and economic potential. The outcome of this project will provide communities, local government and transportation planning agencies with innovative ideas and planning strategies that will place the PC area on the path to sustainable growth and prosperity.</p>					
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**Proposing Transportation Designs and Concepts to Make Houston METRO's
Southeast Line at the Palm Center Area more Walkable, Bikeable, and
Livable**

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Research Report SWUTC/15/600451-00048-1

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EXECUTIVE SUMMARY

Victim to urban decline, The Palm Center (PC) has changed over time. Although the PC has benefited from several economic development endeavors designed to ignite economic and community growth and revitalization, the PC has gone from prosperous to blight to prosperous. Aligning with previous research involving Transit Oriented Developments (TOD's), the plans for the PC, indicate that future success correlates to exploring community partnerships and initiatives, and livable center concepts and principles; these are features from previously successful TODs, best practices in TODs, and lessons learned from past development initiatives designed to foster revitalization.

The development of METRO's Southeast Line light rail station at the Palm Center Transit Center presents the prime opportunity to implement design concepts and principles that provide social, environmental, and economic benefits to those living within close proximity of the transit station and for meeting the needs of the community. Palm Center is defining another period of transition in Houston's Livable/Transit Oriented Development history.

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INTRODUCTION

In 1955, The Palm Center (originally known as The Palms Center), became the first major shopping center built outside of Houston's Central Business District (Downtown). It featured over 40 stores and shops as well as a 2,000 car parking lot. Although initially successful, the development model didn't experience long-term success. Decades later, the Palm Center (PC) has fallen victim to urban decay and blight. During the early 2000s, another attempt was made to utilize the PC as a catalyst for revitalization by transforming it into a hub for small business resources, support and development. These efforts have been moderately successful for the community. Since 2013, the development of a new light rail system and a 360-unit housing re-development has created vast potential to spur dynamic change to the local economic, social and civic landscape of the PC.

Research Objective

This research seeks transportation designs and concepts to make Houston METRO's Southeast Line at the PC area more walkable, bikeable, and livable. This research analyzes community partnerships and initiatives to create a viable activity center in the PC. The development of METRO's Southeast Line light rail station at the Palm Center Transit Center presents an opportunity to revitalize the area in conjunction with livable cities and transit oriented development (TOD) concepts, which have been successfully implemented throughout the country.

Transit Oriented Development (TOD) is a planning tool designed to create more livable, pedestrian-friendly communities, where people can reduce their use of single-occupancy vehicles by increasing the convenience of other mobile or non-motorized alternatives to include walking, bicycling, mass transit, vanpools and carpools. Transit Oriented Development projects should be located in higher-density, mixed-use, urban pedestrian districts with high-quality transit service. The Southeast Light rail line and current bus transit stop provides an opportunity to grow the area and create an economic impact.

Lessons learned from past initiatives provide a foundation in understanding various methods of revitalizations. This research will provide the community, local government and transportation planning agencies innovative ideas and planning strategies that will place the PC area on an enhancement path to sustainable growth and prosperity.

Research Focus

The research focus identifies the potential economic impact to the PC area. The work will surmise best case practices of implemented TOD's and livable communities' development. The components for revitalization are based on the following criteria:

- a. What implemented strategies and initiatives have been successful?
- b. What are the demographics and markets?
- c. What solution best aligns the community needs?
- d. What are the characteristics of successful TOD?

LITERATURE REVIEW

Transit Oriented Development is synonymous when using similar ideology. Recent names introduced in everyday vernacular include, but are not limited to the following: Smart Growth, and Livable Communities. A TOD has been described as:

- Higher density, residential mixed-use development along transportation corridors,
- Projects generally within a half-mile of transit, or
- Projects near rail or light rail projects.

(TCRP, 2002; The History of Transit-Oriented Development, n.d.).

Transit Oriented Development provides an opportunity to increase attraction to the area by introducing mixed use development. Mixed-use developments consist of businesses, living areas and shopping areas. Providing transit creates a beneficial environmental impact which could substantially decrease dependency on vehicles.

Development

Transit Oriented Development is utilized in regional planning, city revitalization, suburban renewal and walkable neighborhoods. The approach allows the transportation system to diversify and offers a new range of development patterns for households, business, and cities.

Incorporated into an interconnected life style, various transportation, living and business options are provided (Dittmer, 2004).

Transit Oriented Developments are designed to maximize access to public transport in a residential, commercial or mixed-use area. Ultimately, they discourage an individual's auto-dependency and promote transit ridership. A TOD neighborhood has certain characteristics - they are generally situated in close proximity with a train station, metro station, tram stop, or bus station; and, they are surrounded by relatively high-density development with increasingly lower-density development spreading outwards from the center (Chen, n.d.).

The example of the Blue Line in Los Angeles, California opened with great fanfare. Within ten years of service, there were numerous empty buildings and lots. The anticipated line was supposed to increase mobility in depressed inner city neighborhoods. Four major problems that hampered the Blue Line development included planning, environmental, economic, social and structural (Loukaitou-Sideris, 2010).

Some of the contributing factors that hindered the Blue Line success are listed below:

- (1) Many stations were located in the back lot of the industrial metropolitan of Los Angeles;
- (2) An absence of a critical mass of density near station areas;
- (3) A lack of a good interface with other transportation modes that led to the poor accessibility of many stations;
- (4) Pedestrian unfriendly stations lacking good pedestrian connections to the surrounding neighborhoods;
- (5) A lack of an overall urban design framework or vision for station area development;

- (6) A landscape of deprivation in the immediate station neighborhoods and a general lack of desirable neighborhood amenities;
- (7) Regulatory barriers such as antiquated zoning and a lengthy permitting process;
- (8) Lack of institutional commitment and missed opportunities for land acquisition and joint development from the part of municipalities and transportation agency;
- (9) A lack of community involvement and participation in the planning process (Loukaitou- Sideris & Banerjee, 2010).

Table 1: Problems that Obstruct TOD Development

<i>Barriers to Successful TOD</i>	Planning Problems	Environmental Problems	Social and Structural Problems	Economic problems
	Lack of planning	Incompatible land types,	Poverty, unemployment,	Lack of development incentives
	Coordination and joint development with community	Site/ Land contamination	Lack of political influence	Crime and gang violence creating a negative images for investment
	The TOD was created away from the center of the communities	Land not available for new houses development	Crime and gang violence	Absence of a critical mass of density
	Interface with other transportation modes	Zoning issues	Inability to create commercial and mixed-use projects	

Economic realities, trends and concerns have expanded the market for TODs and have encouraged a larger segment of the public to seek alternative ways of living beyond the single-family homes. Planning and development, for the Blue Line, seemed unprepared. It gives the impression of little concern about the growth and development around the Line. To encourage growth of the area, specific incentives were offered for development by municipalities.

Walkability

Transit Oriented Developments emphasize the “integration of transit on a regional basis” and walkability in the neighborhood, (Calthorpe, 1993). Barriers to walking include lack of pedestrian infrastructure, significant elevation changes, and long blocks. These factors may change the distance pedestrians are willing to walk to and from a station.

A TOD design, higher density development is allowed or required within a short distance of the transit station (300-500 ft.). Located further away from the station, 500-1500 ft., there is usually another less intensive zone with a continued mixture of uses. The City of Austin, TX, created overlay zones— Gateway, Midway, and Transition – with distances and development intensity similar to those listed above (City of Austin, 2005).

How to create a successful plan for TOD

Pre-planning for a TOD allows for direction of growth while creating attractive ridership option for the area. Some solutions identified by Smutny in “*The Next American Metropolis: Ecology, Community, and the American Dream*” include the following:

- Educate and involve the public
- Offer good urban design configurations
- Develop strong public/private partnerships
- Achieve better coordination among different public entities
- Actively recruit pedestrian-oriented, transit-friendly uses

The function of a TOD is to organize growth that will be supportive to transit. Creating mix-use facilities such as commercial housing, jobs, parks, and creating a pedestrian friendly walking environment encourages density development. Redevelopment should be encouraged around existing neighborhoods and transit corridors.

Using incentives to encourage developer growth can help overcome potential barriers to investors. There are various types of incentives, short term tax abatement, grants, and a streamline permit process.

How to make TODs work:

- Pre-plan for TODs
- Educate and involve the public
- Offer good urban design configurations
- Develop strong public/private partnerships
- Achieve better coordination among different public entities
- Actively recruit pedestrian-oriented, transit-friendly uses
- Find a solution to the parking dilemma
- Make transit more appealing
- Achieve better coordination among different public agencies
- Incentives

Integrating the models will result in an increase in the proportion of regional trips by public transport which will reduce pressure on the road network during the peak periods.

Zones are defined as:

- Zone 1 = ¼ a mile or 400m (5- or 10-minute walk)
- Research tested the above debate by defining station precincts larger than the potential 10-minute walk, incorporating an area up to a five-minute drive from the station.
- Comparison Zone:

- Zone 1 = $\frac{1}{4}$ a mile or 400m (5- or 10-minute walk) + 5 minute drive by vehicle

Design of Study

At the end of this study, the relationship between successful TOD, Livable Community and Mix-Use Development will be associated with the current and future plans for Palm Center in Houston, Texas. This will allow the reader the opportunity to consider both sides of the issue and determine whether future communities could be fit (a “model design formula for success”) with Transit Oriented Development. Specific tasks are as follows:

- Task 1: Literature Review,
- Task 2: Information Collection,
- Task 3: Analyze Information,
- Task 4: Synthesize Findings,
- Task 6: Develop Summary Conclusions and Recommendations.

The study area is supported by the OST/South Union Management District. The PC is currently in progress to bring multi-use facilities to the area. As the PC has changed over time, from prosperous to blight to prosperous, the study’s literature reviews how TOD’s previously established incur successful growth. The existing TOD’s define each location’s implementation for growth towards mixed-use development. Palm Center TOD (PCTOD) is defined as ½ mile from the transit station. Where the PC is located in Houston is not densely populated. Without the ½ mile radius, several high dense areas (apartments) are excluded from the PCTOD with those areas located close but not within the ¼ marker. With the plans for PC in progress, observation of the current stage could indicate future successful correlation to the established TOD’s.

Figure 1 shows what the Palm Center looked like in 1955. The following photos observe the transformation of PC from its original opening until current operations of 2014.



Figure 1: The Palm Canter 1955

The PC served middle-class and predominantly Caucasian people. The shopping center was the first of its kind in Houston, TX established outside of the Central Business District

(downtown). The PC was roughly 26 acres with 268,000 square feet. The PC included 41 stores and 2,000 spaces for parking (Gonzales, 2011). Figure 2 shows the grand opening of the Palm Center.



Figure 2: Palm Center Grand Opening 1955

Over the years, the PC began to decline. Figure 3 shows the state of the Palm Center in 1980. Several stores in the area left the center. For years, the center did not incur new growth.



Figure 3: Palm Center 1980



Figure 4: Palm Center Decline

As PC continued to lose business occupants, the decline was to the point where the buildings were not inhabited. See Figures 4 and 5. Embattled but not defeated, the PC ran into political troubles as the city had a dispute with the federal government on the use of funds. The City was trying to redevelop the PC into what is now the Palm Center Business and Technology Center.



Figure 5: Further Decline



Figure 6: Current Palm Center Entrance

Currently, PC houses one of Houston's Public Libraries and a Harris County Hospital District facility. The Texan's YMCA is housed in the Center's area, but is not attached to a Palm Center building. See Figures 6 and 7.



Figure 7: Newly Built Texan YMCA

Figure 8 outlines the recent land use categories. Identification of vacant lots provides potential for increased mixed-use developments along the transit line. The impact of using these areas can facilitate growth and provide options to increase walkability. With the 2014 median home value of \$93,000, studies implicate that surrounding land values increase when a TOD is successful. This encourages a livable community and means that revitalizing the PC activity zone has a positive impact on the community.

Legend

- Palm Center
- METRO_LRT_Lines

half mile distance

- <all other values>

LU_CODE_DE

- Commercial
- Farm/Ranch Land (not in use)
- Government Owned
- Industrial
- Religious/Fraternal
- Residential Available Inventory (vacant)
- Residential Condo (Townhouse 2+ stories)
- Residential Low-Moderate Income
- Residential Multi-Family
- Residential Other
- Residential Single-Family
- Residential Two-Family
- Undetermined Land Use
- Utility Right of Way
- Vacant
- Vacant Commercial
- Vacant Residential Lots/Tracts



Figure 8: Palm Center Land Use

Evaluation of Results and Discussion

The Southeast Management District, various community leaders and stakeholders held a workshop to discuss revitalization efforts in the PC area. The study on the Griggs Rail station utilized a half mile radius to identify the potential impact zone of the area. Using that parameter, the Geographic Information System (GIS) programmed the 17 different types of land uses in the area. The new line extends from downtown to PC, a former shopping center located at the intersection of Griggs Road and Martin Luther King Boulevard. Currently the PC serves the community with a 160,000square-foot mixed-use complex comprised of government agencies, nonprofit organizations, and office suites for small businesses.

This area has 954 properties, 61 of those properties are directly on the rail line. The selection area mostly encompasses four defined land types - Residential, Religious, Commercial, and Government. The interior of the study area of PC is centered by surrounding residential land use. New investments in infrastructure would help to sustain the surrounding neighborhoods and would enhance the economic strength of Southeast Houston. Figure 9, Palm Center Land Use, showcases the opportunity to merge similar land use categories. This visualization presents possible commercial and mixed use facilities. Figure 9 also presents a prospectus for a denser living environment and increased rail ridership.

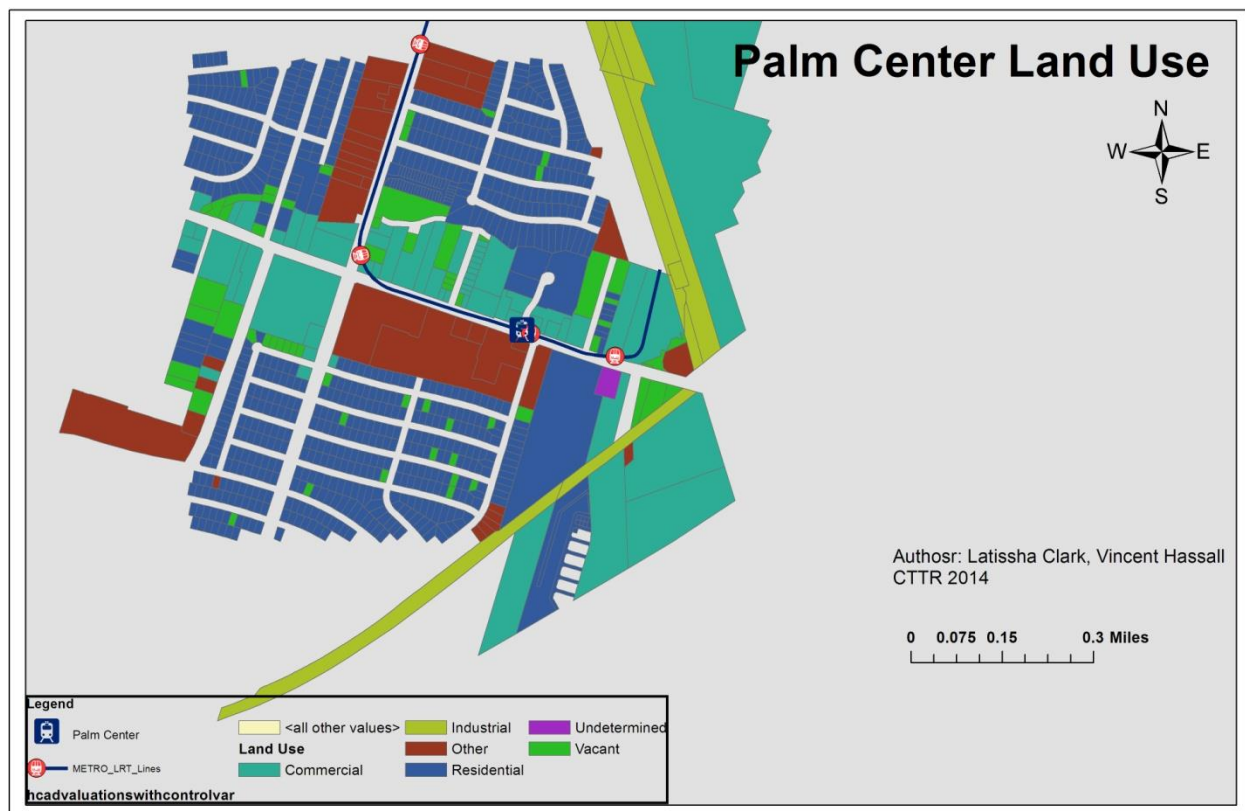


Figure 9: Potential Impact of Mix-Use in Palm Center

Summary and Results

PC has changed over time, from prosperous to blighted and now to revitalized; this study identifies how previous developments were established for successful growth. This latest effort to revitalize Palm Center TOD is defining another period of transition for the area. Supported by the OST/South Union Management District, Palm Center (PC) is currently bringing multi-use facilities to the area. With several high dense complexes (apartments) located within relatively close walking distance to PCTOD, additional developers were encouraged to provide multi-use housing options. Aligning with previous research involving TODs, the plans for the PC indicates that the area should prove to be successful.

References

- Boarnet, M., Compin, N. (1999). Transit-Oriented Development in San Diego County Journal of the American Planning Association Vol. 65, Iss. 1.
- Calthorpe, Peter. (1993). *The Next American Metropolis: Ecology, Community, and the American Dream*. New York, New York: Princeton Architectural Press, page 41-43.
- Chen, J. Hamilton. M., et al. (n.d.). "Transit Oriented Development and Cluster Development.
- City of Austin. (2005). *Questions and Answers from February 3, 2005 Council Hearing on Transit-Oriented Development (TOD)*: Page 1.
- Curtis, C. (2008). Evolution of the Transit-Oriented Development Model for Low-Density Cities: A Case Study of Perth's New Railway Corridor. Planning Practice & Research Vol. 23, Iss. 3.
- Curtis, Carey and Mellor, Roger. (2011). Anticipating a New Railway: The Relevance of Transit-Oriented Development to Businesses in a Car-Oriented City Urban Policy and Research Vol. 29, Iss. 2.
- Dittmar, H., & Ohland, G. (Eds.). (2004). The New Transit Town: Best Practices in transit oriented development. Island Press. Duany, A. (2013). 20 Years of New Urbanism. In E. Talen, Charter of the New Urbanism (Second Edition). New York, New York, US: McGraw-Hill Education.
- Gonzales, J. (2011, July 15). Palms Center in pictures. Retrieved April 22, 2015, from <http://blog.chron.com/bayoucityhistory/2011/07/palms-center-in-pictures/>
- Metro King County, Department of Transportation. (2007). "Metropolitan Place, Renton TOD." October 2005. Accessed via: <http://www.metrokc.gov/kcdot/tod/renton.stm>. Accessed on: February 24, 2007.
- Loukaitou-Sideris, Anastasia. (2010). *A New-found Popularity for Transit-oriented Developments? Lessons from Southern California Department of Urban Planning*, University of California, Los Angeles, USA Online publication date: 18 January 2010.
- Lund, H. (2006). Reasons for Living in a Transit-Oriented Development, and Associated Transit Use. Journal of the American Planning Association Vol. 72, Iss. 3.
- Smutny, Kent. September (2002). "Renton Rebounds with Infill Projects." Accessed via: <http://www.djc.com/news/re/11137648.html>. Accessed on: February 23, 2007.