

VALUE CAPTURE AND INNOVATIVE FINANCING OPTIONS FOR A PREMIUM TRANSIT SYSTEM ON NW 27TH AVENUE IN MIAMI-DADE COUNTY



FINAL REPORT
August 2014

Prepared for:
Miami-Dade County
Office of Citizens' Independent Transportation Trust

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Executive Summary

Introduction

This study, *Innovative Financing Options for a Premium Transit System on NW 27th Avenue in Miami-Dade County* ("the Report") was requested by the Miami-Dade County's Citizens' Independent Transportation Trust (CITT) to examine the potential to use value capture techniques to partially fund transit improvements on NW 27th Avenue in Miami-Dade County ("the County"). The Report estimates the potential funding that can be generated by value capture to support the development of a premium transit system on NW 27th Avenue ("the Project"). The Report was prepared on behalf of CITT by IMG Rebel – CITT's financial consultant – teaming with Planning & Economics Group ("the Research Team").

This study is a continuation of CITT's efforts to develop new revenue streams and innovative financing options to improve the financial and operating performance of Miami-Dade Transit (MDT). Please refer to prior reports prepared by the Research Team for CITT, *Evaluating Innovative Financing Opportunities for Miami-Dade Transit, 2009* ("CITT 2009 Report"), *Analysis of Operating Revenue Enhancement Opportunities for Miami-Dade Transit Phase I, 2010* ("CITT 2010 Report"), and *Analysis of Operating Revenue Enhancement Opportunities for Miami-Dade Transit Phase II, 2012* ("CITT 2012 Report"), for more details on innovative funding and financing options.

Furthermore, this Report borrows from a 2013 study, *Applying Innovative Financing Options For A New Fixed-Route Transit Line In Miami-Dade County* ("CITT 2013 Report"), which focused on a fixed-link between Downtown Miami and Miami Beach. The basic methodology is the same, yet certain assumptions differ.

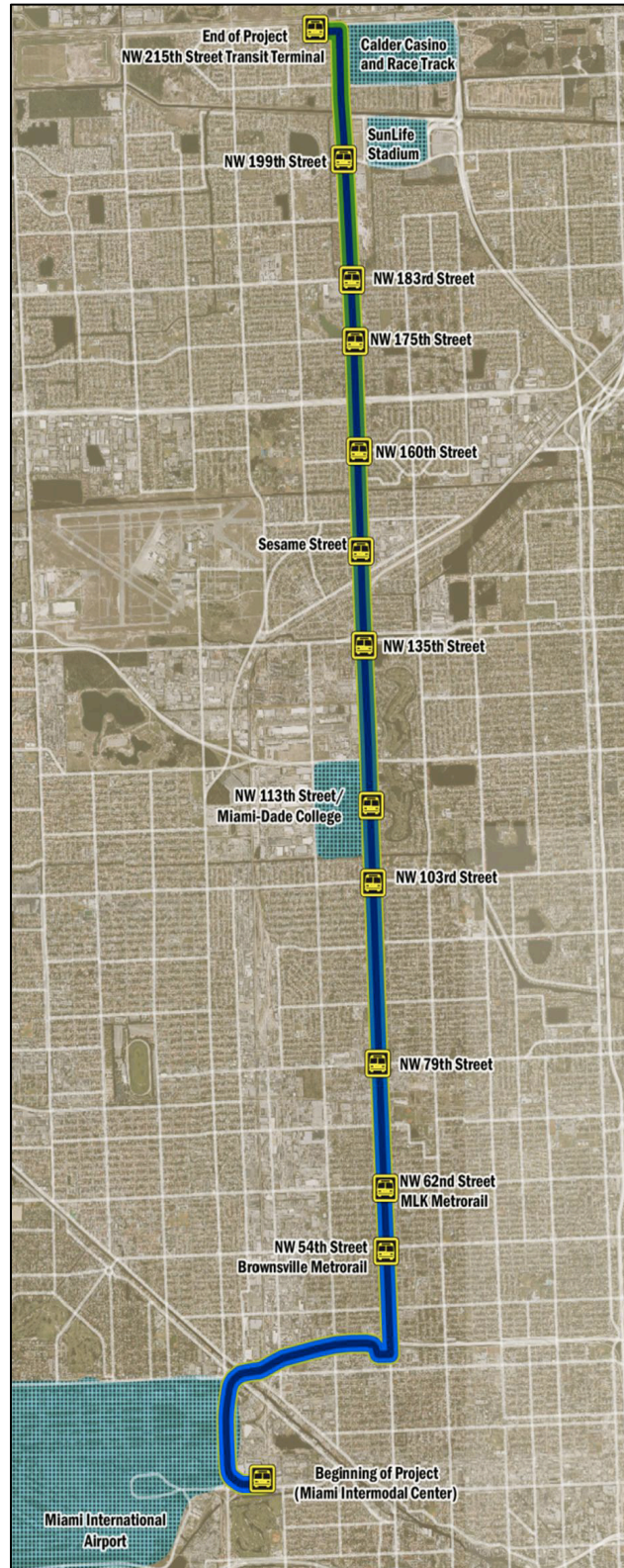
Premium Transit System for NW 27th Avenue

NW 27th Avenue ("the Corridor") is one of the few continuous north-south arterials within the County and serves as a gateway between Broward County and central Miami-Dade County. The Corridor is not homogenous with commercial developments in northern sections and residential properties in the southern sections.

The Project, a premium transit system on the Corridor, begins at the Miami Intermodal Center (MIC), located adjacent to the Miami International Airport, and extends north along NW 27th Avenue from State Road (SR) 112 (Airport Expressway) to NW 215th Street at the Broward County Line. The total length of the proposed premium transit system along the Corridor is approximately 13 miles.

The Corridor was the subject of a study by the Miami-Dade Metropolitan Planning Organization in June 2013, titled *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Plan*. Prior to that study, the Corridor was extensively analyzed over the last two decades. The studies included proposals for heavy rail extension and the implementation of rapid transit alternatives. Appendix 1 contains more background on the various studies and progress made on a transit system for NW 27th Avenue.

Figure 1: Potential Alignment of the Premium Transit



Value Capture

Value capture finance is a way by which private property owners who benefit from a project partially fund the transportation investment by paying a form of tax or fee. The rationale behind value capture financing is that transportation investments create better access to real estate and, depending on the location and land use, such access creates significant value to property owners.

There are several value capture techniques, including benefit assessment districts (ADs), tax increment financing (TIF) districts, joint development, development impact fees, land value tax, transportation utility fees, and others. In this Report, the Research Team estimated the value capture potential under two value capture techniques: (1) benefit assessment districts, and (2) tax increment financing as illustrated in Table 1 below.

Table 1: Real Estate Value Capture Mechanisms

<i>Mechanism</i>	<i>AD₁</i>	<i>AD₂</i>	<i>TIF</i>
Type of Assessment	<i>Ad valorem</i> assessment (millage)	Assessment on the projected total floor area	<i>Ad valorem</i> assessment
Basis	Assessed value of the properties	Assessment per square foot of floor area	Assessed value of the properties
Pros	Progressive structure – those who benefit most pay the most	Simple computation. Does not vary with assessed value	No increase in amount property owners pay
Cons	Beyond existing assessments, revenue is based on value premium and new development	Does not differentiate higher value property. Beyond existing floor area, revenue based on new development	Depends entirely on rising assessments

For each of the value capture mechanisms, the key assumptions impacting the revenue flow include the following:

- **Area of Impact.** ½ mile area around stations along the 27th Avenue corridor.
- **Density of Development.** Future floor area development in the 30-year horizon: no change in floor area ratio (FAR) and zoning regulations.
- **Pace of Development.** Speed of development from existing floor area to maximum potential: slow, medium, fast.
- **Value Premium.** The amount of increase in property value due to premium transit system and the timeframe in which the value increases.
- **Assessed Properties:** Commercial properties only for ADs. For TIF, all properties except those zoned for government use.

A Microsoft Excel model was created to analyze the revenue generated under each of these three mechanisms and the resulting bonding capacity that represents the construction funds that would be generated. It is important to note that for two of the types of value capture – AD₁ and TIF – the funding generated is dependent on the level of assessments. The levels of assessment assumed for AD₁ and AD₂ in this Report are examples, *not recommendations*,

based on the range experienced in other cities and sized to generate similar revenue levels for the three mechanisms. In other words, none of the three mechanisms *inherently* generates more revenue than the other. It must be noted that changing the level of assessment can alter the projected estimates for ADs. For instance, in the case of AD₁, by increasing the assessment from \$1 to \$2 for every \$1,000 of assessed value, the estimates will also increase in the same proportion.

Property valuation and rates of development are difficult to predict with accuracy because of changes due to larger economic issues (e.g., the Great Recession). Changes in the assumed rate of growth in property values, and the time in which the study area develops toward the maximum allowed by zoning, may alter the findings. For this reason, growth scenarios are provided in the Report.

Table 2: Value Capture Bonding Estimates

Million	AD ₁	AD ₂	TIF
Slow Growth - 50% of New Development in 25 Years	\$18-\$19	\$36	\$29-\$34
Medium Growth - 50% of New Development in 15 Years	\$22-\$23	\$47	\$45-\$50
Fast Growth - 50% of New Development in 5 Years	\$27-\$29	\$61	\$67-\$73
<p>Note: AD₁ benefit assessment of \$1 for every \$1000 of assessed value; AD₂ benefit assessment of \$0.10 per square foot of floor area; TIF based on 2013 Miami-Dade County Wide Operating Millage of \$4.7035 and 50% retained by current tax authority. The ranges in estimates are based on various cases: (1) 15% land value premium and 5% building value premium, (2) 20% land value premium and 10% building value premium, and (3) 10% land value premium and 0% building value premium.</p> <p>* Estimates based on best available data. Correcting for some potential data issues could alter the estimates.</p>			

Other Funding Sources and Financing Mechanisms

While there is significant value capture potential to support the project, additional funds will be required. These are likely to include federal New Starts grants under MAP-21 and future transportation legislation for up to 50% of the project. In addition, funds may be available from state and local revenue streams such as Florida Department of Transportation (FDOT) grants and sales tax revenue.

Innovative financing, in the form of subsidized, subordinate, and flexible loans on the federal level from the U.S. DOT TIFIA office and on the state level from the Florida State Infrastructure Bank (SIB), could reduce financing costs. However, these funds are limited and competitive.

Public-private partnerships (P₃), in the areas of joint development, operations, construction, and/or financing may provide some assistance to the Project. However, public funds will be needed to repay the private party because transit does not produce surplus revenue. The primary benefit of a P₃ is likely to be the transfer of construction and operations cost risk; this may result in lower costs throughout the lifecycle of the project and help leverage other funding sources.

Federal MAP-21 legislation offers several federal funding options for fixed-link programs. This includes Federal Transit Administration (FTA) "New Starts" funding for "Fixed Guideway" projects for which heavy rail transit (HRT), light rail transit (LRT), and bus rapid transit (BRT) are eligible if the project costs more than \$250 million. If the project costs less than \$250 million, then the project is eligible for "Small Starts" funding. MAP-21 also created a "Corridor-based BRT" designation, funding BRT projects that do not run on a separate right-of-way.

Establishing a "Community Redevelopment Agency" (CRA) is a viable local funding and financing mechanism. When a CRA is created, a limited part of the municipality is designated for special tax help. Any new tax revenue from growth in property values in the CRA area stays in the area rather than being shared with the entire city.

Transit oriented development (TOD) is an important local funding option. TOD relies on zoning, tax, and development regulations to encourage compact, high-density development near transit stations, conducive to transit riding. Funding strategies include: (1) public purchase of land for development and sale or renting, (2) partnership with major private owners/developers for joint development or financial contribution from private sector, (3) greater ridership and farebox revenue. Miami-Dade County is already planning a TOD at NW 215th Street.

Operations

While this Report focuses on securing capital funding for development of the Project, funds to cover MDT's operating expenses for the prospective new transit line are also important to consider throughout implementation, enabling operation of both the existing and new system in a state of good repair.

Conclusions

Value capture can clearly be a key part of a basket of funding sources for the Project that includes traditional funds such as the Federal Transit Administration New Starts funding, state grants and sales taxes, as well as innovative funding such as State Infrastructure Bank loans and joint development. Combining several funding and financing tools will increase the viability of the Project and enable the County to deliver it in the shortest possible timeframe.

This Report is intended to serve as a tool for County leaders to evaluate the potential approaches to fund the cost of developing the premium transit system on NW 27th Avenue and potentially other corridors, by providing examples (*not recommendations*) to consider.

I. Introduction

A. Background and Purpose of the Report

This study, *Innovative Financing Options for a Premium Transit System on NW 27th Avenue in Miami-Dade County* ("the Report") was requested by the Miami-Dade County's Citizens' Independent Transportation Trust (CITT) to examine the potential to use value capture techniques to partially fund transit improvements on NW 27th Avenue in Miami-Dade County ("the County"). The Report estimates the potential funding that can be generated by value capture to support the development of a premium transit system on NW 27th Avenue ("the Project"). Specific details of this premium transit system, such as the choice of transit technology, station locations, and capital and operating costs, are being still planned and therefore outside the scope of this Report. The estimated value capture funding and financing approaches in this Report are independent of the Project's implementation and operational details.

This study is a continuation of CITT's efforts to develop new revenue streams and innovative financing options to improve the financial and operating performance of Miami-Dade Transit (MDT), and to support the development of transit projects in the County. These reports include:

- *Evaluating Innovative Financing Opportunities for Miami-Dade Transit, 2009* ("CITT 2009 Report"),
- *Analysis of Operating Revenue Enhancement Opportunities for Miami-Dade Transit Phase I, 2010* ("CITT 2010 Report"),
- *Analysis of Operating Revenue Enhancement Opportunities for Miami-Dade Transit Phase II, 2012* ("CITT 2012 Report"), and
- *Applying Innovative Financing Options for a New Fixed-Route Transit Line in Miami-Dade County* ("CITT 2013 Report").

These studies examine MDT's potential to use non-traditional and innovative finance tools to reduce MDT's operating revenue gap and to provide funds to develop proposed capital expansions. The CITT 2009 and 2010 reports highlighted value capture finance, among other innovative financing mechanisms. The CITT 2013 Report focused on a fixed-link between Downtown Miami and Miami Beach. This Report borrows from the CITT 2013 Report; the basic methodology for the estimation of the value capture funding potential is the same, yet some assumptions differ to reflect the differences in the corridors.

The Report was prepared on behalf of CITT by IMG Rebel – CITT's financial consultant – teaming with Planning & Economics Group ("the Research Team").

B. A Premium Transit System for NW 27th Avenue

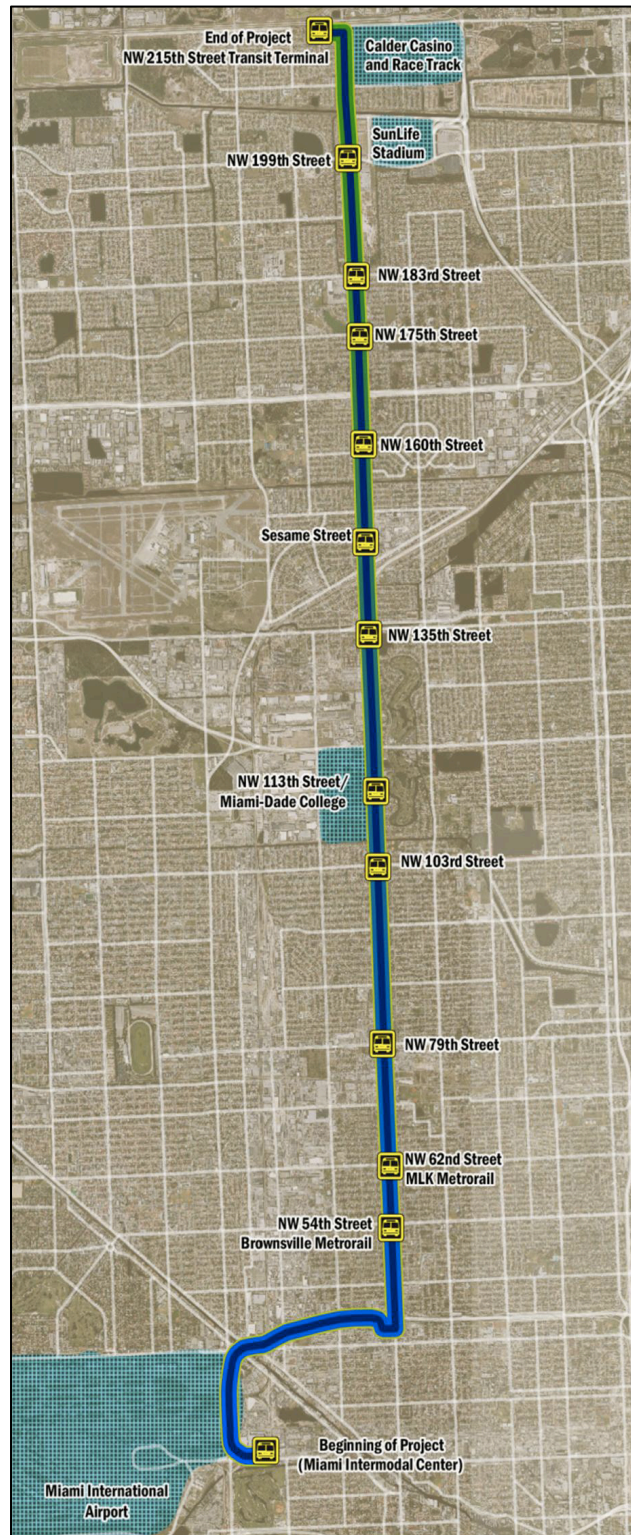
NW 27th Avenue ("the Corridor") is one of the few continuous north-south arterials within the County and serves as a gateway between Broward County and central Miami-Dade County. The Corridor is not homogenous - it features commercial developments in northern sections and residential properties in the southern sections. The Corridor can generally be subdivided into three areas, depending on how quickly development takes place, based on the Research Team's visual inspection and research of what is being planned for the area. The area north of NW 167th Street has the greatest potential for more commercial and higher intensity development based on existing activity. The area between NW 167 Street and NW 135th Street is in transition, while south of NW 135th Street is developing much less

intensely – except for a few pocket areas like NW 79th Street and Brownsville. However, throughout the Corridor there are opportunities for in-fill and redevelopment.

The Project, a premium transit system on the Corridor, is proposed to begin at the Miami Intermodal Center (MIC), located adjacent to the Miami International Airport, and extend north along NW 27th Avenue from State Road (SR) 112 (Airport Expressway) to NW 215th Street at the Broward County Line. The total length of the proposed premium transit system along the Corridor is approximately 13 miles. A proposed alignment of the premium transit system is provided in Figure 2. At the south end of the Corridor, MIC serves as an intermodal transportation terminal providing access to Metrorail, Metrobus, Miami International Airport, Tri-Rail (commuter rail), Amtrak (intercity rail), and Greyhound (intercity bus). At the north end of the Corridor, a new facility will be constructed on the approximately 14-acre property at NW 215th Street to serve as a transit terminal and park-and-ride accommodations for the Project, as well as facilitate transfers to local MDT Metrobus and Broward County Transit routes. The transit terminal and park-and-ride project also intends to foster transit-oriented development (TOD) opportunities.

The Corridor was the subject of a study by the Miami-Dade Metropolitan Planning Organization in June 2013, titled *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Plan*. Prior to that study, the Corridor was extensively analyzed over the last two decades. The studies included proposals for heavy rail extension and the implementation of rapid transit alternatives. Please see Appendix 1 for more background on the various studies and progress made on a transit system for NW 27th Avenue.

Figure 2: Proposed Alignment of 27th Avenue Premium Transit System



C. Value Capture

This section of the Report provides a brief background on value capture techniques and a detailed discussion of the value capture potential for a prospective premium transit system on NW 27th Avenue.

In the context of transportation infrastructure, value capture is defined as a financing technique “by which the agency responsible for the development of the urban transport infrastructure captures part of the financial benefits gained by land developers or the community at large.”¹ It is widely acknowledged that the presence of a transportation system has a measurable impact on the value of surrounding real property. According to the Urban Land Institute research team, reviews of multiple studies demonstrate that – in most cases and to a certain degree – transit investments have resulted in increases in property values for nearby communities.² This is because the property values are viewed as a comprehensive index of all the benefits generated by the development of a transportation system, including improved accessibility and an increase in business opportunities.³

Value capture finance is a way by which private property owners who benefit from a project partially fund the transportation investment by paying a form of tax or fee. The rationale behind value capture financing is that transportation investments create better access to real estate and, depending on the location and land use; such access creates significant value to property owners.

There are several value capture techniques, including benefit assessment districts (ADs), tax increment financing (TIF) districts, joint development, development impact fees, land value tax, transportation utility fees, and others. Please refer to the CITT 2009 Report, *Evaluating Innovative Financing Opportunities for Miami-Dade Transit*, for further details. In this Report, the Research Team estimated the value capture potential under two value capture techniques: (1) benefit assessment districts, and (2) tax increment financing.

D. Objective of the Report

Like many transit agencies across the U.S., system expansion faces severe funding challenges from budget constraints for developing infrastructure enhancements. Traditional sources of funding, such as federal and state grants, and debt, will be insufficient for planned infrastructure enhancements such as the Project. The objective of this Report is to quantify the potential to partially fund the Project using real estate value capture, and to identify the key issues affecting this corridor and other potential future corridors financed in part using value capture.

Other likely sources of funding and finance are likely to be used for the Project, including: federal New Starts/Small Starts Funds, Florida Department of Transportation (FDOT) and other State funds, the TIFIA program, the Florida State Infrastructure Bank (SIB), and public-private partnerships (P3). These

¹ Farrell, S., Tsukada, S., Kurawami, C. (1994). *Value Capture: The Japanese Experience*, Technical Report, Financing Transport Infrastructure c.f. Francesca Medda and Marta Modelewska, “Land Value Capture as a Funding Source for Urban Investment: The Warsaw Metro System”, Ernst & Young: Better Governance Program, 2009-10.

² Campbell, J. ULI Research Roundup: The Impact of Transit on Property Values. Accessed November 2013, <http://www.uli.org/infrastructure-initiative/uli-research-roundup-the-impact-of-transit-on-property-values/>

³ Farrell, S., et al. (see above).

are discussed in detail in prior CITT reports. This Report has conducted a brief discussion of the potential to fund the Project through some of these sources of funding and financing.

The Report also discusses how a “Community Redevelopment Agency” (CRA) could help fund and leverage tax increment monies in special districts established by a municipality.

E. Analysis Methodology

The primary question for the Research Team was:

How much money can value capture techniques provide towards the capital costs of the Project?

To answer this question, the Research Team considered the findings of the previous CITT reports, conducted additional literature reviews, and developed an appropriate methodology to determine the potential funding available from value capture techniques for the Project’s capital costs.

F. Value Capture Analysis Model

The Research Team developed a Microsoft Excel spreadsheet model to carry out its analysis. A separate value capture model is created for the ½ mile area around each proposed station (“the Station Area”) of the premium transit system. Each value capture model contains a detailed set of instructions for use. The key worksheets include:

- Three worksheets that contain all the global assumptions that are used in the model. These include the types of properties that are in the assessment districts, the utilization of property, financial assumptions, assessment levels, scale and pace of development, and a table linking land uses to zoning categories. Each of these assumptions can be altered to analyze the results under different scenarios.
- Separate worksheets calculating the revenue potential for each value capture technique. The data in the assumptions worksheet is applied to the details of every parcel in the Station Area, in order to calculate the annual revenue generated by assessment districts or TIF for the Station Area.
- Finally, a summary worksheet that combines the results of each value capture technique along with a macro. The macro runs the various growth scenarios and value premium cases. The output in the summary worksheet compiles annual value capture revenues for each Station Area and the bonding capacity of the value capture revenues.

G. Policy Considerations

It is important to recognize that this Report and the accompanying value capture model are intended to serve as tools for County leaders to evaluate the potential for value capture to fund the cost of developing a premium transit system for the Corridor. This leads to two key considerations in understanding the findings of the Report:

- First, assumed rates for assessment district selected by the Research Team for the Report are *examples, not recommendations*. The examples were selected based on the ranges found in other cities, and to ensure that the revenue generated by the different real estate options is of a similar magnitude.

- Second, the value capture model can be used for other transit corridors. All that is needed is to acquire data on current land uses, property/building values, and zoning codes in the new study areas. The assumptions can then be adjusted to reflect the characteristics of the new study corridor.

II. Value Capture Financing

A. Real Estate Value Capture Techniques

1. Benefit Assessment District

A benefit assessment district⁴ (AD) is a special tax or fee assessment area created to support the construction and/or operation of new transit service. A typical AD **creates a zone around the stations**, with property owners within the zone paying a tax or fee based on the real estate valuation of such property (ad valorem benefit assessment), or a levy per square foot of floor area (specific benefit assessment). Frequently, residential property is exempted from the benefit assessment. Assessments can also be “tiered” to reflect the fact that properties nearer to the station have higher benefit. In special cases a benefit assessment district may cover an entire rail corridor.

Please see the CITT 2013 Report, *Applying Innovative Financing Options For A New Fixed-Route Transit Line In Miami-Dade County*, which goes into further details about ADs.

2. Tax Increment Financing

Similar to a benefit assessment district, tax increment financing (TIF) involves the creation of an assessment area. However, unlike an AD, property owners in the TIF assessment area pay no additional tax or fee on their property. Rather, the TIF district retains any increases in real estate taxes as property values rise and new development occurs due to the new transit service. Because they do not involve additional taxes or fees, TIF districts are more politically palatable than ADs. However, they are not without controversy, because they divert revenue otherwise going to the general fund. Furthermore, a TIF district may be most successful in economically disadvantaged neighborhoods that will enjoy growth due to transit.

Please see the CITT 2013 Report, *Applying Innovative Financing Options For A New Fixed-Route Transit Line In Miami-Dade County*, which goes into further detail about examples of TIFs in other jurisdictions.

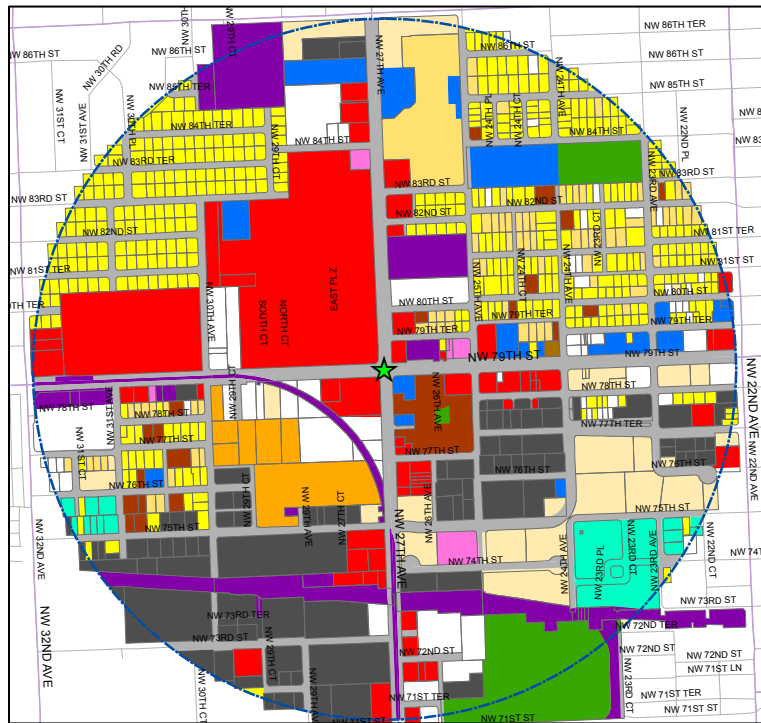
B. Real Estate Value Capture Methodology

Based on the above understanding of value capture, this Report estimates the potential for value capture financing of a fixed-route rail line along 27th Avenue. The development of a new fixed-route transit line will generate value to owners of real estate in two interrelated ways. First, via increased real estate values near the transit stations, which is reflected as value premium. Second, the presence of a transit system encourages higher density development (as permitted by the applicable zoning

⁴ Benefit assessment districts are also sometimes referred to as special assessment districts, local improvement districts, business improvement districts, and others.

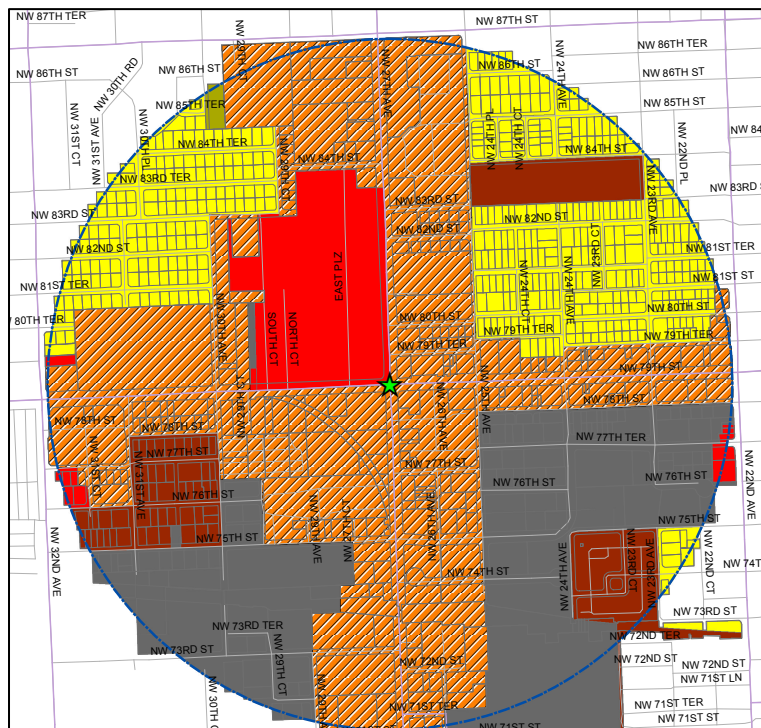
This section on methodology outlines the key assumptions behind the estimates prepared by the Research Team. A step-by-step guide to the calculation of the potential value capture estimates is provided in Appendix 2. Note the value capture model allows changing the amounts assumed as discussed below, to apply as needed to new example projects.

Figure 4: Land Use in Station Areas



Note: The figure is for illustration only.

Figure 5: Zoning in Station Areas

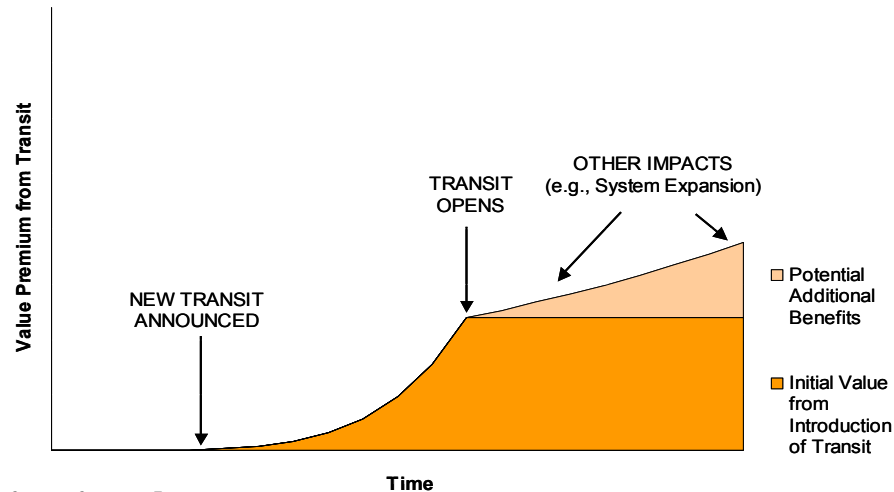


Note: The figure is for illustration only.

b. Time Period of Impact

Changes in real estate values due to the value premium and density of development could occur before the completion of the transit system (i.e., in anticipation of its completion), upon completion, and over the long-term, as shown in Figure 6.

Figure 6: Value Premium from Transit Curve



Land use impacts and value premium are likely to accrue in an incremental manner over time based on how quickly the benefits of the transit system are realized. Therefore, the Research Team created growth schedules for each element for the project analysis period. In this schedule, the Research Team assumed that 50% of the value premium will accrue equally in the first five years, with the rest of the premium realized equally over a period of 30 years – the chosen time horizon for the estimates.

A 30-year period was chosen for this analysis because this duration is a reasonable period to realize the full effects of both value premium and changes in real estate. Furthermore, this corresponds with the typical duration of long-term debt that the County issues.

c. Land and Building Values

The assessed value provided by the Miami-Dade County Property Appraiser is a combination of both land value and building value. The data available provided separate land and building values, creating total market value (but not assessed value) for each parcel. The Research Team used the market value split as a proxy for determining the assessed land and building values.

d. Value Premium

The value premium attributable to real estate by virtue of the development of a nearby transit system is variable. Authoritative research on the precise impact is hard come by as the value of real estate is

affected by several contextual variables⁵, including the scope of the transit infrastructure, real estate market conditions, traffic congestion, and other neighborhood qualities.⁶ One research study found that the value premium could range from 5-10% on residential real estate values and 10-30% on commercial real estate values.⁷ Please see the CITT 2013 Report, *Applying Innovative Financing Options For A New Fixed-Route Transit Line In Miami-Dade County*, which goes into further detail regarding value premiums in other jurisdictions.

Based on the review of literature on value capture, the Research Team has assumed a premium of 15% on the land value and 5% on the building value, as the Report's central/base case. In addition, there are higher and lower premium levels.

e. Density of Development

As discussed above, one of the ways in which transit infrastructure enhances the value of real estate is by encouraging larger buildings in the vicinity of the transit line. That is, the availability of fixed-route transit encourages more intense (higher density) development of the land parcels subject to the maximum floor area ratio allowed in the respective zoning district. However, the higher-intensity development in the zoning districts will not occur immediately; rather, it will be incremental due to the long lead times to plan and develop real estate, as well as other market factors. Therefore, the Research Team created a schedule for the growth in the intensity of development wherein it is assumed that the future floor area development will occur steadily each year across the 30-year time horizon to reach the maximum development.

Furthermore, development up to the maximum floor area ratio (FAR) permitted under the zoning code is not a likely for every land parcel, because not all property owners will choose to increase building sizes. In a study relating to Portland Central Business District, it was found that properties within two blocks of the streetcar line realized 75 percent to 90 percent of the FAR allowed by the zoning, compared with development at 43 percent for properties located more than three blocks from the line.⁸ The Research Team therefore assumed that only 50% of the potential FAR available for development would be achieved.

f. Pace of Development

In addition to the density of development, future development can occur at a varying pace. As a result, the Research Team assumed different growth scenarios to reflect the possibility of development occurring over different time periods. The assumed pace of development of the FAR available for development include three scenarios: (1) the slow growth scenario that assumes half of new development in 25 years over the 30-year period, (2) the fast growth assumes half of new development occurs in the first five years, and (3) the medium growth assumes half of new development occurs in the first 15 years and rest in the remaining 15 years. Essentially, medium growth is a scenario of linear growth.

⁵ Matthew Doherty, *Funding Public Transport Development through Land Value Capture Programs*.

⁶ Nadine Fogarty, et al., *Capturing the Value of Transit*, Center for Transit-Oriented Development, 2008.

⁷ Matthew Doherty, *Funding Public Transport Development through Land Value Capture Programs*.

⁸ E.D. Hovee & Company. *Portland Streetcar Development Impacts*, November 2005 c.f. Nadine Fogarty, et al., *Capturing the Value of Transit*, Center for Transit-Oriented Development, 2008.

g. Types of Properties Included in the Analysis

The Research Team classified properties in the study area into two categories: one, properties that would be included in assessment districts for value capture, and, two, land uses that are excluded from assessment (e.g. residential, governmental, and non-profit land uses).

C. Value Capture Estimates

The following tables show the key results of the real estate value capture analysis. Table 1 details the total financing capacity of value capture revenues expected over a 30-year period from each of the three value capture techniques (i.e., AD1, AD2, and TIF). As explained, bonding capacity for the revenue streams is the amount of funds that could be utilized to pay for capital costs of the premium transit system.

As shown in Table 3, the total bonding capacity generated by real estate value capture is likely to range from \$18 million to \$61 million for AD1 and AD2, depending on the growth scenario, value premium, and the level of benefit assessment. These results are based on the assumptions described above; if additional funds are required, policy makers could choose to increase the benefit assessment levels in the case of ADs. TIF bonding capacity ranges from \$29 million to \$73 million, depending on the pace of development.

It must be noted that none of the three mechanisms *inherently* generates more revenue than the other, and changing the level of assessment can alter the projected estimates for ADs. For instance, in the case of AD1, by increasing the assessment from \$1 to \$2 for every \$1,000 of assessed value, the estimates will also increase in the same proportion.

Finally, it is important to remember that property valuation and rates of development are difficult to predict with accuracy because of changes due to larger economic issues (e.g., the Great Recession). Changes in the assumed rate of growth in property values, and the time in which the study area develops toward the maximum allowed by zoning, may alter the findings. For this reason, growth scenarios are provided in the Report.

Table 3: Consolidated Value Capture Bonding Estimates

Million	AD1	AD2	TIF
Slow Growth - 50% of New Development in 25 Years	\$18-\$19	\$36	\$29-\$34
Medium Growth - 50% of New Development in 15 Years	\$22-\$23	\$47	\$45-\$50
Fast Growth - 50% of New Development in 5 Years	\$27-\$29	\$61	\$67-\$73
Note: AD1 benefit assessment of \$1 for every \$1000 of assessed value; AD2 benefit assessment of \$0.10 per square foot of floor area; TIF based on 2013 Miami-Dade County Wide Operating Millage of \$4.7035 and 50% retained by current tax authority. The ranges in estimates are based on various cases: (1) 15% land value premium and 5% building value premium, (2) 20% land value premium and 10% building value premium, and (3) 10% land value premium and 0% building value premium. * Estimates based on best available data. Correcting for some potential data issues could alter the estimates.			

As mentioned earlier, MIC and Earlington Heights are not along NW 27th Avenue but are part of the proposed alignment. Value capture bonding estimates for Station Areas around MIC and Earlington Heights are shown in Table 4. The estimates from MIC and Earlington Heights together constitute about 20% of the total consolidated estimates for the Corridor, which is a material share.

Table 4: MIC and Earlington Heights Value Capture Bonding Estimates

Million	AD1	AD2	TIF
MIC			
Slow Growth - 50% of New Development in 25 Years	~\$3.0	~\$4.7	~\$3.0
Medium Growth - 50% of New Development in 15 Years	~\$3.5	\$5.7	~\$4.3
Fast Growth - 50% of New Development in 5 Years	~\$4.1	~\$7.1	~\$6.0
Earlington Heights			
Slow Growth - 50% of New Development in 25 Years	~\$0.9	~\$1.5	~\$1.8
Medium Growth - 50% of New Development in 15 Years	~\$1.0	~\$1.9	~\$2.7
Fast Growth - 50% of New Development in 5 Years	~\$1.1	~\$2.4	~\$3.9
<p>Note: AD1 benefit assessment of \$1 for every \$1000 of assessed value; AD2 benefit assessment of \$0.10 per square foot of floor area; TIF based on 2013 Miami-Dade County Wide Operating Millage of \$4.7035 and 50% retained by current tax authority.</p> <p>The ranges in estimates are based on various cases: (1) 15% land value premium and 5% building value premium, (2) 20% land value premium and 10% building value premium, and (3) 10% land value premium and 0% building value premium.</p> <p>* Estimates based on best available data. Correcting for some potential data issues could alter the estimates.</p> <p>**Please note that since the range of estimates is small only approximate estimates are provided and only for an order of magnitude comparison against the total consolidated estimates. The tilde (~) stands for "approximately".</p>			

III. Alternative Funding

In addition to innovative sources of finance such as value capture, this Report also briefly explores alternative sources of financing available for transit development. Three specific alternative sources of finance are detailed below. The Report does not address other sources of alternative finance, such as P3s including availability payments.

A. New Starts Program

The Federal Transit Administration's (FTA) discretionary New Starts program is the federal government's primary financial resource for supporting locally planned, implemented, and operated transit "guideway" capital investments. Eligible fixed-guideway projects include, but are not limited to, rapid rail, light rail, commuter rail, automated guideway transit, people movers, and exclusive facilities for buses (such as bus rapid transit) and other high occupancy vehicles. In the past, FTA's New Starts program has helped make possible hundreds of new or extended transit fixed guideway systems across the country, varying from heavy to light rail, and commuter rail to bus rapid transit systems. In July 2012, a new authorization was enacted entitled the Moving Ahead for Progress in the 21st Century Act (MAP-21) that changed several aspects of FTA's New Starts program, with a key objective of

streamlining the New Starts evaluation process. MAP-21 also introduced a new project justification criterion of “congestion relief”.

A New Starts project is defined to mean a new fixed guideway project, or a project that is an extension to an existing fixed guideway, that has a total capital cost of \$250 million or more or for which the project sponsor is requesting \$75 million or more in New Starts funding.

Please see the CITT 2013 Report, *Applying Innovative Financing Options For A New Fixed-Route Transit Line In Miami-Dade County*, which elaborates on MAP-21 as well as New Starts and Small Starts processes.

B. MAP-21 Fixed-Link Programs

MAP-21 offers several funding options to fund fixed-link programs. As shown in Figure 4, “Fixed Guideway” projects, which include heavy rail transit (HRT), light rail transit (LRT), and bus rapid transit (BRT) can be funded through New Starts grants if the eligible project cost is greater than \$250M. If the project costs less than \$250 million, then the project is eligible for “Small Starts” funding which is a more streamlined process. Projects can also qualify for “Very Small Starts,” if the project is less than \$50 million. The key definition for these projects is that the majority of the project operates in separate right-of-way.

MAP-21 also created a “Corridor-based BRT” designation. BRT projects that do not have a separate right-of-way can qualify for this program. Corridor-based BRTs are not eligible for as much formula funding as Fixed Guideway projects, reflecting the FTA’s policy to encourage fixed guideway that help transit avoid road congestion and become a more attractive transportation option.

Figure 7: MAP-21 Fixed-Link Programs

Program	New Starts ⁽¹⁾	Small Starts/ Very Small Starts ⁽²⁾
Fixed guideway for HRT, LRT or BRT: <ul style="list-style-type: none"> Majority operates in separate right-of-way Substantial investment in a single route in a defined corridor Includes defined stations, traffic signal priority, and short headway bidirectional services 	✓	✓
Corridor-based BRT: <ul style="list-style-type: none"> Substantial investment in a defined corridor Defined stations Traffic signal priority for transit Short headway bi-directional services for a substantial part of weekdays & weekend days 		✓
⁽¹⁾ Total project cost ≥ \$250M and/or New Starts funding sought is >\$75M. ⁽²⁾ Total project cost <\$250M and Small Starts share <\$75M.		

IV. Financing and Delivery Options

A. *Transportation Infrastructure Finance and Innovation Act (TIFIA)*

TIFIA is a federal loan program sponsored by the U.S. Department of Transportation. Initiated in 1998, TIFIA provides subordinate, patient capital to projects meeting its criteria. TIFIA may also provide a line of credit or loan guarantee to support a transportation project. TIFIA loans are a powerful tool for transportation projects because they can be structured to delay principal repayment, they are subordinate to senior bonds (although there is a “springing lien” right in the case of default), and have low interest rates.

The interest rate on the TIFIA loan is set at the equivalent U.S. Treasury rate plus one basis point, with the most recent TIFIA rates found on the TIFIA website at: <http://www.fhwa.dot.gov/ipd/tifia/>.

In general, the following projects are eligible for TIFIA financing or credit support: highway facilities, transit projects, rail projects, public freight rail facilities, and certain port facilities.

Under the Moving Ahead for Progress in the 21st Century Act (“MAP-21”) legislation passed in 2012, several important changes have been made to the TIFIA program:

- Increasing authorization—from \$122M in past years to \$750M in FY 2013 and \$1B in FY 2014—in TIFIA budget authority from the Highway Trust Fund to pay the subsidy cost of credit assistance. After reductions for administrative expenses and application of the annual obligation limitation, TIFIA will have approximately \$690M available in FY 2013 and \$920M in FY 2014 to provide credit subsidy support to projects. Although dependent on the individual risk profile of each credit instrument, collectively, and based on historic subsidy costs, this budget authority could support approximately \$6.9B in lending capacity in FY 2013 and \$9.2B in lending capacity in FY 2014.
- Expanding eligibility to include related improvement projects grouped together, as long as the individual components are eligible and the related projects are secured by a common pledge. This is particularly relevant for transit projects that may rely on a sales tax pledge, allowing transit sponsors to finance several projects over a period of time with a series of TIFIA loans, similar to a bank credit facility.
- Increasing the percentage of eligible project costs that can be covered by a TIFIA loan from 33% to 49%, if the project can demonstrate the overwhelming benefits of that increase.
- Making TIFIA more attractive for issuers that rely on highly-rated sales taxes and other non-project related funding sources for financing, by removing the “springing lien” requirement as is typical for other loans.

The increase in the TIFIA program partially addresses the tremendous demand for TIFIA among a variety of projects throughout the US. This demand grew in part due to the tight credit environment in the recession as well as the attractiveness of the TIFIA terms for major, new transportation projects. The new capacity may address the demand for TIFIA, depending on how many projects, which have

sought TIFIA financing are approved for TIFIA monies and whether projects are delayed—which happens for some projects.

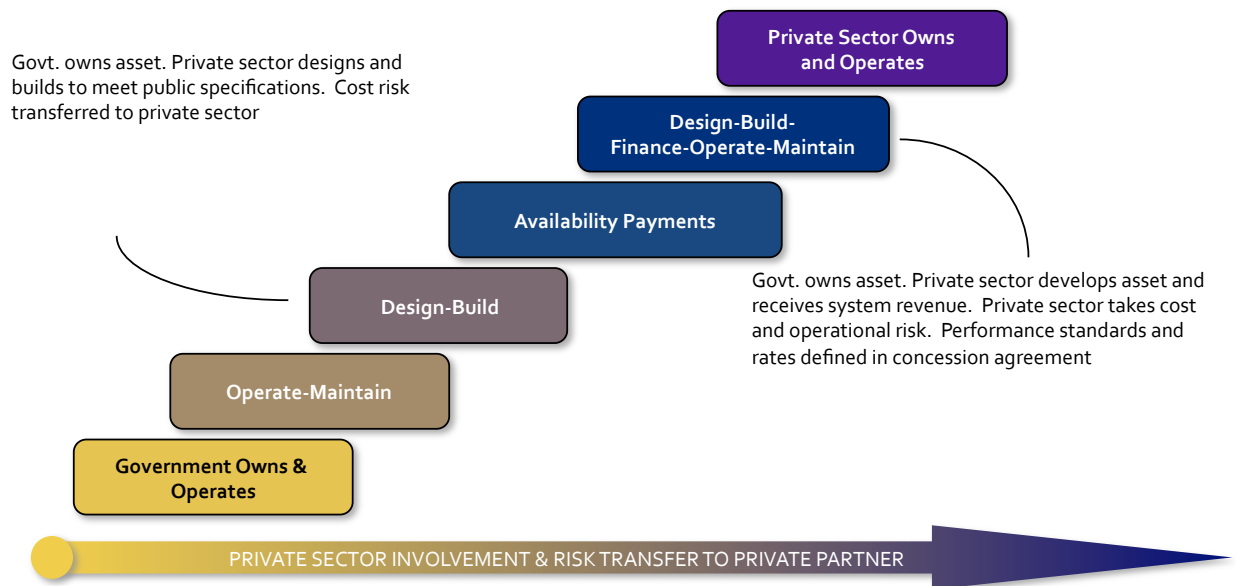
Miami-Dade County has already used TIFIA funding as part of the financing for the Miami Intermodal Center. Further TIFIA opportunities may exist for major transit projects in the County.

B. Public-Private Partnership

Traditional public transportation projects have involved the use of design-bid-build contracts followed by public operation of the completed systems. However, in certain cases, the private sector is better suited to manage specific risks, notably certain construction, technology and operational risks. These risks are transferred through some form of agreement between a private sector entity and the public sector project sponsor, in a P3. Through appropriately structured P3s, the private sector can bring in efficiencies due to its ability to manage certain risks better—or at a lower cost—than the public sector.

The figure below depicts the continuum of project delivery options, from traditional public development to pure private development.

Figure 8: Continuum of Project Delivery Options



A detailed discussion of the various types of P3s can be found in prior CITT Reports.

A new P3 law came into effect in Florida on July 1, 2013, after Governor Rick Scott signed a bill into law authorizing counties, municipalities, school boards, and other political subdivisions in the state to enter into P3 agreements to provide for public infrastructure including transportation facilities that “serve a public purpose”. In passing the new law, the legislature acknowledged that “there is a public need for timely and cost-effective” procurement of public infrastructure, but there are “inadequate resources” to develop the same. Furthermore, the legislature stated that P3s have demonstrated that they can meet those public needs by “improving the schedule for delivery, lowering the cost, and providing other benefits to the public.”

The legislature's purpose is also to encourage investment in the state by private entities; to facilitate various bond financing mechanisms, private capital, and other funding sources for the development and operation of, including expansion and acceleration of such financing to meet the public need; and to provide the greatest possible flexibility to public and private entities contracting for the provision of public services.

Some of the key features of the new law are as follows:

- The new law recognizes unsolicited proposals and provides the procedures for the consideration of unsolicited proposals.
- The law requires that public entities perform an independent analysis of the proposed P3 project to demonstrate the cost-effectiveness and overall public benefit before the procurement process is initiated or the contract is awarded.
- Financing provisions in the new law allow public entities to lend funds to private enterprises and utilize innovative finance techniques including federal loans, commercial bank loans, and inflation hedges. Additionally, a public entity may provide its "own capital or operating budget to support" a project including debt issuance, but prohibits the public authority from indemnifying the financing source.

The new P3 law provides the Miami-Dade County with the authority to leverage P3s as an option to realize the fixed-route transit line and rely on the innovative financing techniques highlighted in this report to fund the project, subject to the satisfying all other federal, state and local regulations.

C. Community Redevelopment Agency (CRA)⁹

Local governments are able to designate areas as "Community Redevelopment Areas" when certain conditions exist, based on Florida Law Chapter 163, Part III. Since all the monies used in financing CRA activities are locally generated, CRAs are not overseen by the state, but redevelopment plans must be consistent with local government comprehensive plans. Examples of conditions that can support the creation of a Community Redevelopment Area include, but are not limited to, the presence of substandard or inadequate structures, a shortage of affordable housing, inadequate infrastructure, insufficient roadways, and inadequate parking.

To document that the required conditions exist, the local government must survey the proposed redevelopment area and prepare a "Finding of Necessity." If the Finding of Necessity determines that the required conditions exist, the local government may create a Community Redevelopment Area to provide the tools needed to foster and support redevelopment of the targeted area.

A CRA is usually funded through tax increment financing, also known as TIF. The taxable value of all real property within the CRA area is determined as of a fixed date, the base year. The local CRA board decides how to spend the CRA funds based upon staff recommendations.

It is important to note that when a CRA is created, a limited part of the municipality is designated for special tax help. Any new tax revenue from growth in property values in the CRA area is used for projects in the area rather than being shared with the entire city, usually to promote private sector

⁹ Please see Appendix 3 for sources used by the Research Team for information and analysis on CRA.

activities. The city can spend CRA receipts as it comes in or borrow against the expectation of future growth.

Generally, CRAs are the only entities in use that provide tax increment financing as a financing tool. CRAs do not have to use tax increment financing, but it is seen as a major reason to create a CRA. The 27th Avenue Corridor passes through three established CRAs as follows:

- City of Miami Gardens – State Road 826 (approximately NW 166th Street) to Sun Life Stadium,
- City of Opa-Locka – NW 135th Street to NW 151st Street, and
- NW 79th Street Corridor – along NW 79th Street from NW 7th Avenue to NW 37th Avenue.

1. City of Miami Gardens

Miami Gardens is in the process of establishing a community redevelopment agency and has held community workshops earlier this year. The consultant hired to study the establishment of the CRA (Keith and Schnars of Fort Lauderdale) indicated that the CRA could provide about \$16 million annually by the 30th year of the CRA based on forecasted tax increment finance monies. The total revenue could add up to \$263 million by the end of the plan, around the year 2044. City officials have said that the plan is to encourage investment in the city through offering small business and facade improvement loans to business owners for streetscape improvements and parking garages.

2. City of Opa-Locka

The City of Opa-Locka CRA was established in December 2012. The vote by the Miami-Dade Commission in November 2013, approved the CRA plan, created the trust fund, and finalized the agreement between the County, the City, and the CRA.

The City plans to use the CRA as a tool to change the way it looks and the way people perceive the City of Opa-Locka. The CRA covers 295 acres, which is about 18.8% of the city's land. The CRA's boundaries include the residential neighborhoods of Magnolia North, Magnolia Gardens, City Center, and the commerce areas in the Opa-locka and Lejeune industrial parks.

3. NW 79th Street Corridor

The CRA on NW 79th Street was established in 2009. In 2011, the Board of County Commissioners approved a redevelopment plan for the area and established the CRA trust fund. The plan seeks to stimulate and guide the redevelopment of the NW 79th Street corridor and to create a better place for people to live and work. The projects in the redevelopment plan include housing, mixed use and transit-oriented development, streetscape improvements, and safety.

V. Conclusions

As demonstrated by projects across the U.S., fixed-route transit drives significant value to the real estate that is located along the corridor. With public funding limited at the federal, state, and local levels, it is challenging to develop new fixed-route projects using only traditional revenue sources. Mechanisms that enable the County to monetize some of the benefits transit creates are powerful tools for providing funding from private property owners. In addition, the direct connection between new transit and increasing property values and development provides strong rationale for utilizing value capture.

Value capture alone is inadequate to finance the Project, or other fixed-route transit projects. However, it can be part of a basket of funding sources that includes traditional funds such as FTA New Starts funding, state grants, and sales taxes, as well as innovative funding such as State Infrastructure Bank loans and joint development. Combining several funding and financing tools will increase the viability of the Project and enable the County to deliver it in the shortest possible timeframe.

Real estate value capture via benefit assessment districts or tax-increment financing could reasonably fund the NW 27th Avenue premium transit system in the range of \$18-\$73 million (financing capacity). With growing economic activity and potential for future development along the Corridor, the Project includes the necessary attributes for value capture success.

The actual revenue from value capture depends on the type and level of the benefit assessment, or the details of the TIF district. The choice of mechanism itself does not necessarily dictate the amount of the value capture benefit; that is, the results presented are examples and should not be read as stating that one technique necessarily will generate more revenue than the others. Rather, the details of the value capture mechanism are largely a policy question beyond the scope of this report.

Value capture is not a perfect tool. Assessment districts can be controversial, particularly given recent economic uncertainty. TIF districts, while not requiring extra payment from property owners, reduce additional potential funds that would otherwise flow to the County for other uses. Furthermore, TIF revenue is entirely dependent upon real estate property value increases, which are difficult to forecast. This can impact the bankability of TIF revenue for construction bond issuances.

Appendix 1 – NW 27th Avenue Corridor Background¹⁰

The NW 27th Avenue corridor begins at the Miami Intermodal Center (MIC), located adjacent to the Miami International Airport, and extends north along NW 27th Avenue from State Road (SR) 112 (Airport Expressway) to NW 215th Street at the Broward County Line for approximately 13 miles. At the south end of the corridor, the MIC serves as an intermodal transportation terminal providing access to Metrorail, Metrobus, Miami International Airport, Tri-Rail (commuter rail), Amtrak (intercity rail), and Greyhound (intercity bus). At the north end of the corridor, a new transit terminal and park-and-ride facility will be constructed in the vicinity of NW 215th Street to serve as a transit terminal for the NW 27th Avenue premium transit system, as well as local MDT Metro-bus routes and Broward County Transit routes. The vision includes the addition of transit-oriented development (TOD) at this terminal facility.

The corridor was the subject of a study by Miami-Dade Metropolitan Planning Organization in June 2013, titled NW 27th Avenue Enhanced Bus Service Concepts and Environmental Plan. In this study, stations along the NW 27th Avenue route would be spaced approximately every mile. The stations would provide passenger amenities including seating area, protection from the elements, and traveler information displays. The service would benefit from operational improvements including signal priority and queue jumps at several key intersections. Service for the route is planned to be 10-minute peak headway and 20-minute mid-day headway. Existing local bus service with more frequent stops would continue to operate along the corridor. The environmental documentation for the project consisting of a Documented Categorical Exclusion, in accordance with requirements of the National Environmental Policy Act (NEPA), has been completed. Operating strategies, service plan, and capital and operation and maintenance cost estimates for the NW 27th Avenue enhanced bus service were also completed during this study.

It is important to note that alternatives for the development of the NW 27th Avenue corridor have been extensively analyzed over the last two decades. During that time the proposals have included heavy rail (Metrorail) extensions and the implementation of bus rapid transit (BRT) alternatives.

In the early 1990s the North Corridor Metrorail Extension was proposed. The proposal planned to extend the elevated heavy rail fixed guideway Metrorail service approximately nine miles in the NW 27th Avenue corridor from north of the Dr. Martin Luther King Jr. Station at N.W. 62nd Street to NW 215 Street at the Broward County Line. Studies were conducted, and in 1995 the Miami-Dade MPO completed the Alternatives Analysis Study, identifying Metrorail/heavy rail as the Locally Preferred Alternative (LPA) for the Corridor. The final Environmental Impact Statement was never submitted to the Federal Transit Administration because the one-cent sales tax referendum failed, and this was to be the source of funding for the project. Subsequently, MDT and MPO began re-evaluating lower cost transit alternatives that could be financially feasible.

After the half-cent sales tax referendum passed, MDT and Miami-Dade MPO again contemplated a Metrorail alternative for the corridor. A Supplemental Draft Environmental Impact Statement (SDEIS) was submitted in 2004. FTA approved the SDEIS in 2006 and in 2007 the Final Environmental Impact Statement. FTA issued a Record of Decision (ROD) for the project. However, the project received a New

¹⁰ "NW 27th Avenue Enhanced Bus Service Concepts and Environmental Plan," prepared for Miami-Dade Metropolitan Planning Organization, by Kimley-Horn and Associates, Inc., June 2013.

Start rating of “medium-low” by FTA in 2008, because a funding shortfall for maintaining and operating the system was identified. The New Starts rating compelled MDT to revisit transit mode options in the 2009 Modal Analysis, which examined four transit modes – BRT, BRT-Light Enhanced Bus Service, Light Rail Transit, and Heavy Rail Transit. In 2009, the study concluded that the BRT options would be less costly to build, operate and maintain than the rail options.

Appendix 2 – Value Capture Estimation Methodology

Below is an overview table that summarizes the methodology adopted to estimate the value capture revenue potential under three different value capture mechanisms identified by the Research Team for this Report. It must be noted that steps 1-7 are common to Assessment District 1 (ad valorem), Assessment District 2 (square foot assessment), and TIF. Detailed elaboration of the steps in the table is provided in following pages.

Table 5: Overview of Value Capture Estimation Methodology

Steps 1-7

Step	Steps Common for AD ₁ , AD ₂ , and TIF
1	Identified study area boundaries where benefits accrue along 27 th Avenue.
2	Each Assessment Description in the Miami-Dade County Property Appraiser's parcel-wise database was matched to a zoning district based on the best fit between the Assessment Description and the permitted uses under each zoning district.
3	Assessed Value was split into land and building value per square foot by using the percentage of Market Value by land value and building value as a proxy for determining the split of land and building values in the Assessed Value. Where the split was unavailable, land value was assumed to be 70% of the Assessed Value.
4	A value premium was applied to the average assessed land value per square foot of floor area. Similarly, a value premium was applied to the average assessed building value. The premiums were applied according to a schedule of value premium growth.
5	The current FAR under each Assessment Description was calculated by dividing the building area by the land area.
6	The maximum allowable FAR for each Assessment Description was determined from applicable Miami-21 and City of Miami Beach zoning regulations. By subtracting the current FAR from the maximum allowable FAR, the potential to add more floor space was calculated, termed as "FAR Available for Development".
7	If the FAR Available for Development was positive, the potential for new floor area development was calculated by multiplying the land area by the FAR Available for Development. It was assumed that only 70% of the FAR Available for Development would be utilized. By adding the new floor area to the existing floor area, cumulative floor area for each assessment description was derived.

Steps 8-10

Step	AD1 (ad valorem)	AD2 (square foot assessment)	TIF
8	The projected total floor area was multiplied by the average Assessed Value per square foot of floor area to estimate the Assessed Value of projected total floor area for each Assessment Description.	A specific benefit assessment per square foot of floor area of \$0.10 was applied to the projected total floor area to derive the total potential revenue through a specific Benefit Assessment on square footage of floor area.	The projected total floor area was multiplied by the average Assessed Value per square foot of floor area to estimate the Assessed Value of projected total floor area for each Assessment Description.
9	A Benefit Assessment of \$1 for every \$1000 of Assessed Value was applied to the Assessed Value of projected total floor area to calculate the potential revenue from Benefit Assessment in the study area.	Not Applicable	The current County Millage of 4.7035 was applied to the assessed value of projected total floor area to calculate the potential County Tax revenue in the study area.
10	Such benefit assessment revenue generated from only the Assessment Districts added to determine the annual value capture through value premium and denser development of land parcels.	Not Applicable	The County Tax revenue for Year zero was subtracted from the County Tax revenue of all subsequent years to derive the incremental County Tax revenue.

1. Benefit Assessment District – Value Capture Through Value Premium and Higher Density of Development (AD1)

The Research Team estimated the potential annual revenue generated by the benefit assessment millage rate/fee for every year of the 30-year period for properties inside the study area. This analysis took into consideration the premium on the average assessed value due to transit access and higher density of development of the land parcels. AD1 is essentially an *ad valorem* assessment based on the assessed value of the properties.

In this Report, the Research Team applied a benefit assessment of \$1 for every \$1000 of Assessed Value of the properties in the assessment area.

The steps below were followed to estimate the benefits of AD1:

- Step 1 – The Research Team first started with the zoning information in the study area, and identified certain zoning districts as Assessment Districts wherein a pre-determined benefit assessment would be levied on the Assessed Value of the property.
- Step 2 – Each Assessment Description in the Miami-Dade County Property Appraiser’s parcel-wise database was then matched to a zoning district based on the best fit between the Assessment Description and the permitted uses under each zoning district.
- Step 3 – Thereafter, Assessed Value was split into land and building values per square foot. The percentage split between land and building values of Assessed Value was not available. Rather, the split of the Market Value by land value and building value was used as a proxy for determining the split of land and building values in the Assessed Value. Where the split was unavailable, land value was assumed to be 70% of the Assessed Value. This assumption was based on observing the average percentage of land value across the different Assessment Descriptions that ranged from 60% to 80%, and therefore, the Research Team chose a middle figure of 70%.
- Step 4 – A value premium was applied to the average assessed land value per square foot of floor area due to the development of the transit system. Similarly, a value premium was applied to the average assessed building value. The premium was applied according to a schedule of value premium growth, both for land and building values.
- Step 5 – The current FAR under each Assessment Description was calculated by dividing the building area by the land area.
- Step 6 – Based on the zoning district allocated to each Assessment Description (Step 2), the maximum allowable FAR for the Assessment Description in question was determined. By subtracting the current FAR (Step 5) from the maximum allowable FAR, the potential to add more floor space was calculated, termed as “FAR Available for Development”.
- Step 7 – If the FAR Available for Development was positive, then the Research Team calculated the potential for new floor area development by multiplying the land area by the FAR Available for Development. As explained in the assumptions to the calculations, not all of the allowable FAR is developed on each property. Therefore, for the Report, it was assumed that only 70% of the FAR Available for Development would be utilized. For instance, if the FAR Available for Development was 1, then it implied that only 0.70 of that would be developed.

By adding the new floor area to the existing floor area, projected total floor area for each assessment description was derived. Thus, the projected total floor area for each assessment description for each year over the 30-year horizon was calculated.

- Step 8 – Thereafter, the projected total floor area was multiplied by the average Assessed Value per square foot of floor area to estimate the Assessed Value of projected total floor area for each Assessment Description.

- Step 9 – A Benefit Assessment of \$1 for every \$1000 of Assessed Value (along the lines of County Millage), was applied to the Assessed Value of projected total floor area to calculate the potential revenue from Benefit Assessment in the study area.
- Step 10 – Finally, revenue generated by the benefit assessments was added to determine the annual value capture from value premium and denser development of land parcels.

2. Benefit Assessment District – Value Capture Through Benefit Assessment on Square Foot of Floor Area (AD2)

AD2 is based on a specific benefit assessment on the projected total floor area in the Benefit Assessment Districts. After determining the FAR Available for Development and annual projected total floor area, a benefit assessment per square foot of floor area is applied to the projected total floor area. Based on literature review, the Research Team applied a benefit assessment of \$0.10 per square foot of the projected total floor area. Policymakers would need to decide the actual AD assessment.

Steps 1 to 7 from AD1 (described above) were followed with one additional step. The additional step, Step 8, involved applying the specific benefit assessment per square foot of floor area of \$0.10 to the projected total floor area (which includes both the existing and new floor area) to derive the total potential revenue through a specific Benefit Assessment on square footage of floor area.

3. Tax Incremental Financing (TIF)

To calculate the incremental County property tax revenue if achievable using TIF, this Report considers the County Tax revenue from value premium and denser development in all zoning districts (including residential zones) at the existing County millage rate. County Tax revenue before the announcement/development of transit system (Year 0) continues to flow to the general fund, while incremental County Tax revenue above this amount in subsequent years after the announcement/development of transit system is used to support transit. In this calculation, it is assumed that there will not be a change in County millage rate and the incremental County Tax revenue is derived from increases in the assessed value per square foot of floor area and denser development of land parcels.

- Steps 1 to 8 performed in the calculation of AD1 (described above), were utilized for this calculation, with two additional steps.
- Step 9 – In this step, the current County Millage of 4.7035 was applied to the assessed value of projected total floor area to calculate the potential County Tax revenue from the study area.
- Step 10 – The County Tax revenue of Year 0 was subtracted from the County Tax revenue of all subsequent years to derive the incremental County Tax revenue.

4. Bonding Capacity of the Value Capture Revenues

The revenues from real estate value capture will flow annually during the study period. The County may choose to leverage the revenue stream by issuing revenue bonds, backed by the value capture revenues alone or combined with other County revenues pledged.

Utilizing the potential revenue that could be raised through value capture mechanisms, the Research Team estimated the bonding capacity of such revenue. The net present value (NPV) of the revenues, less 10% for bond issuance fees and debt service reserves, from the 30-year period was calculated by discounting it at a rate of 6%. This discount rate was based on the long-term cost of capital of Miami-Dade County, derived from the Official Statements of recent bond issues during 2012, and is similar to the average interest rate paid by Miami-Dade County on the long-tenured bonds of about 5%.¹¹ The Research Team added another percent (100 basis points) to historic rates to account for potential future increase in interest rates, given the current low interest rate environment.

Furthermore, the Research Team recognized that there is uncertainty in realizing the above-mentioned value capture revenue streams, as they are contingent on the accrual of value premium and actual development of future floor area. The levels of uncertainty are, however, different for the three value capture mechanisms. Both AD1 and AD2 yield revenues even without any value premium or new floor area development, although increased AD1 revenues requires either value premium or further development to take place, whereas, AD2 revenues are contingent only on further development of floor area. TIF on the other hand is much more uncertain. Without value premium or new floor development, revenue from TIF would be zero.

¹¹ The 5% interest rate was also in line with the 20-year (1993-2013) average interest rate paid by 20-Bond Index consisting of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corporation's AA rating. www.bondbuyer.com.

Appendix 3 – Sources

The following are sources used to develop community redevelopment agencies sections:

- Excerpts from a white paper on CRAs by Kris Van Lengen, City Planner.
- Urban Land Institute, Southeast Florida/Caribbean, Technical Assistance Panel for the 79th Street corridor Sites, Miami-Dade Economic Development Advocacy Trust, November 14 and 15, 2013.
- Opa-locka CRA – Opa-Locka News, November 6, 2013.
- Florida Redevelopment Association, Opa-Locka County Approves Funding for the CRA, November 29, 2013.
- County Approves Funding for the Opa-Locka CRA, South Florida Times, November 27, 2013.
- Miami Gardens gets input on Proposed Redevelopment District, Miami Herald, February 27, 2014, by Lance Dixon.

A bibliography covering the literature review and examples of other jurisdictions can be found the 2013 report *Applying Innovative Financing Options For A New Fixed-Route Transit Line In Miami-Dade County*.