Value Capture Analysis

East-West Corridor

Miami-Dade Citizens' Independent Transportation Trust

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1 Introduction and Summary

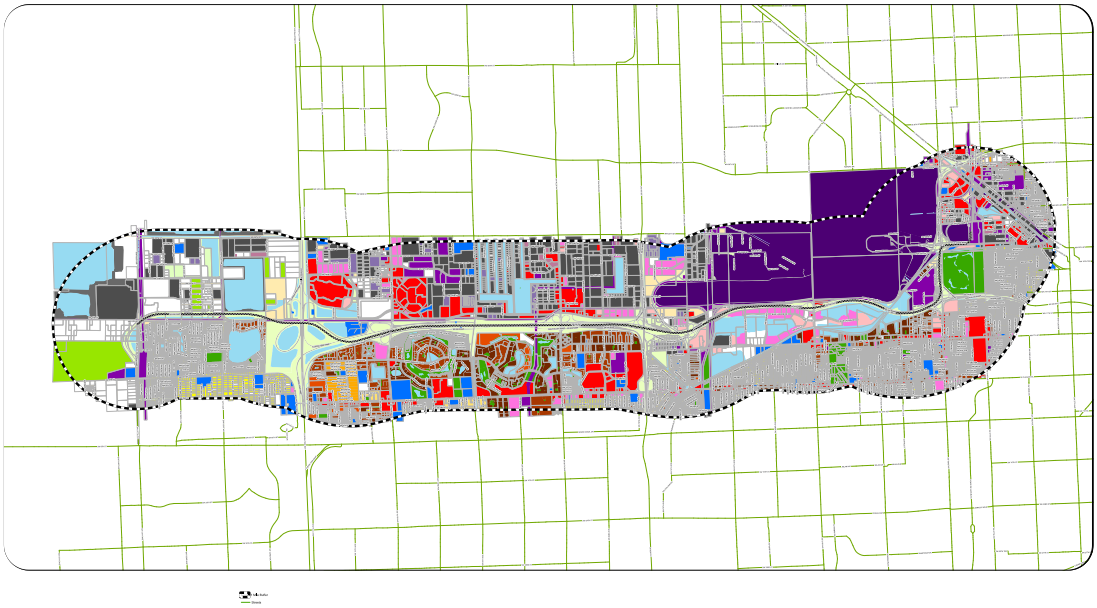
On behalf of the Miami Citizens' Independent Transportation Trust (CITT) The IMG Rebel and Planning & Economics Group (the Team) reviewed innovative funding opportunities the Miami-Dade County (the County) could pursue along the East-West Corridor (the Corridor) including joint development, impact fees, naming rights, and parking increment as part of the planned commuter rail project along the Corridor (the Project).

The Team has estimated value capture estimates in ranges based on growth scenarios and level of assessment or funding dedicated to transit improvements. For instance, for one of the value capture mechanisms – an assessment district (AD2) – $54-268 million (M) could be realized in upfront bond proceeds under the slow growth scenario. Alternatively, it could be $2.9-14M per year under slow growth (Current Year). The other value capture techniques, including Miami-Dade Expressway Authority (MDX) contributions, impact fees, naming rights, may yield additional resources for the Project.

2 Corridor Overview

The Project's planning assumptions include reactivating the CSX line that runs approximately parallel to NW 12th Street, from NW 37th Avenue to NW 137th Avenue as shown in**Figure 1**. The track's eastern portion is just south of Miami International Airport (MIA) and runs parallel to the Dolphin Expressway or State Road (SR) 836. It ends at the existing Miami Intermodal Center, the transportation hub just east of Miami International Airport (MIA) where Metrorail, Tri-Rail, and Transit buses stop.

Figure 1: East–West Corridor Alignment Land Use Map



The Corridor is rich in a variety of land uses including the region's largest commercial airport, MIA; a nearby multi-modal hub, the MIA station; significant warehouse and light industry; high- and medium-quality office space; major regional shopping centers and numerous smaller shopping facilities; a variety of multi- and single-family housing developments; inland waters; and some agriculture. This Corridor also plays a significant role for the County by providing accessibility to and from downtown Miami.

SR 836 dominates the Corridor, as it is raised in many places creating a barrier between the northern and southern sections of the Corridor. Furthermore, the interchanges and access roads create irregularly-sized parcels along the Corridor. SR 836 and the irregular land use makes pedestrian access to planned stations more challenging, especially from the southern portions of the Corridor and could limit the amount of available land for bus and car parking.

The proposed stations of the Project include:

- Miami Intermodal Center (MIC);
- Blue Lagoon Drive and NW 57th Avenue;
- NW 87th Avenue;
- NW 97th Avenue;
- NW 107th Avenue; and
- NW 137th Avenue.

3 Joint Development

3.1 Site Evaluation

The Team conducted a site visit and analyzed land use maps provided by the office of the Miami-Dade Department of Regulatory and Economic Resources. The maps delineated land uses within half and one mile from the Corridor middle, north and south of the CSX tracks.

Based on the land use and development characteristics, the Corridor could be grouped into three sections: the eastern third, the middle third, and the western third of the Corridor.

3.1.1 Eastern Third

The eastern third would be served by a station at NW 57th and Blue Lagoon. The dominant feature of the northern side of the alignment is MIA. The southern side includes corporate office space, some of which are situated in corporate park settings, surrounded by lagoons. This includes the corporate headquarters of Burger King, which just announced it will be building a new building nearby.

There does appear to be one or two publicly-owned properties west of NW 72nd Avenue and north of NW 12th Street that appear vacant. However, the current plan does not contemplate a station near that location. Furthermore, these properties are nearby MIA, which may limit building height. MIA restricts area development to the north as seen in **Figure 2** and **Figure 3**.

Figure 2: West View of Intersection of NW 57th Avenue and Perimeter Road

Figure 3: Site of Proposed Station at NW 57th Avenue

Passengers will come from the Blue Lagoon office buildings, hotels, and commercial establishments. Public and/or private entities would need to provide shuttle bus between the station and the office and commercial complexes for the station to be effective. SR 826, including off-ramps and access roads, intersects the eastern and middle third of the Corridor. It is difficult to imagine property development on publicly-owned land near the intersections.

3.1.2 Middle Third

The middle third of the Corridor, from SR 826 to the Homestead Extension of Florida's Turnpike (SR 821), is characterized by warehouse and retail facilities in the north and high-density residential access in the south. Stations at NW 87th, NW 97th (tentative), and NW 107th Avenues would serve this area of the Corridor. Except for some strips of property along SR 836 as shown in **Figure 4** and near the proposed 87th Avenue station as shown in **Figure 6**, the northern portion of this Corridor lacks major publicly-owned tracks of land as intersections.

Figure 4: View of Corridor West of NW 87th Avenue

Area around NW 87th Avenue includes access roads and potential below-highway parking, but access appears difficult as shown in **Figure 4**.

Figure 5: Corridor Area between NW 72nd Avenue and NW 87th Avenue

The land use around NW 72nd Avenue and NW 87th Avenue is mostly commercial and light industrial.

Figure 6: Proposed Station Site at NW 87th Avenue

The area around NW 87th Avenue is characterized by warehouse and retail facilities.

The properties between NW 97th and NW 107th near the CSX tracks are primarily retail, including car dealers, the Dolphin Mall, and the Miami International Mall. With the addition of high quality commuter rail service developers may increase density on those parcels near the respective NW 97th and NW 107th Avenue stations, perhaps adding office, hotel, or institutional uses, assuming zoning regulations allow for this.

3.1.3 Western Third

In the western third of the Corridor, west of SR 821, there appears to be one larger public property around the northwestern intersection of SR 821 and SR 836. Like other properties near intersections, this property is adjacent to access roads and a lagoon, making non-car access difficult. At this time, planners do not expect a station to be located here. Instead, the end station, as currently contemplated would be around NW 137th Avenue, potentially located on large tracts of vacant private land. There appears to be some industrial and agricultural tracts in the far west as shown in **Figure 7** that are still undeveloped or underdeveloped.

Figure 7: Industrial and Agricultural Land in the Far West of the Corridor

3.1.4 Express Bus Service Along SR 836

There has been significant attention devoted to the Corridor and the alternatives to alleviate traffic along this major County artery. At this time, Miami-Dade Transit is moving forward with a project to provide Express Bus Service (EBS) along SR 836/Dolphin Expressway. The planned service will provide non-stop service, via SR 836, to activity centers including FIU, the Miami International Airport, and the existing Government Center Metrorail Station location in downtown Miami. The Project will include three express lines as follows:

- The first, the A-Line (peak period only with 10 minute headways) will run between the Tamiami Station (SW 8th Street and SW 147 Avenue) and Government Center via SW 8th Street, SW 137th Avenue and SR 836.
- The B-Line (All Day with 20-minute headways) will run between the Panther Station (SW 8th Street and SW 109th Avenue) and the Miami Intermodal Center at Miami International Airport, via SW 8th Street, Homestead Extension of Florida's Turnpike, and SR 836.
- The C-Line (peak period only with 10 minute headways) will run between the Dolphin Station (NW 12th Street and the Homestead Extension of Florida's Turnpike, and Government Center.

The SR 836 EBS will operate on existing roadways. The proposed Panther Station is integrated into FIU's newest Parking Garage 6, which is designed to include space for classrooms, offices, and potential ground floor retail. In addition to the Tamiami and Dolphin Station, the SR 836 EBS will benefit from transit signal priority at congested intersections and bus queue jumps at the intersections where buses travel to and from the auxiliary/bus only lanes near the Panther Station. The EBS will also be allowed to travel conditionally on the paved shoulders of SR 836 when traffic speeds are less than 25 miles per hour, based on an agreement with MDX.

The nature of this EBS will affect the development characteristics of the Corridor. The EBS should complement the Project, providing additional transit capacity along the corridor, with service to some of the same and different destinations, with close integration of schedules and easy transfers with the Project's stations. Depending on how the EBS stations are configured and their relationship to the Project's stations, this service should also enhance the overall development opportunities along the Corridor. Many of these issues will be likely be further investigated in future Project technical studies. The planning phase of this project is now complete. On August 4, 2015, the Federal Transit Administration granted approval to the SR 836 Express bus Service Categorical Exclusion Report.

It is important to note that the Corridor is one of the corridors included in the "Short-and Near-Term Transportation Plan" of the County's Metropolitan Planning Organization. This plan, developed in coordination with Miami-Dade Transit lays the foundation for future transit improvements along the various transit corridors in the County.

3.2 Joint Development Considerations

Joint development occurs when private (or public) entities provide land, assets, or funding to support real estate development near a station, often part of a transit-oriented development (TOD) plan. Agencies can take direct equity stakes in projects through direct cash investments or investing or leasing land in the Project. Joint development can also include air rights development over transportation facilities.

The Corridor's middle portion is made up of mostly private properties (except for property south of the CSX tracks), so that while it may be attractive for TOD, these will not likely yield Project joint development revenues, although they could yield AD and TIF monies.

The property south of the intersection of NW 107th and NW 12th street, which includes the Sports Authority (part of the Miami International Mall) may lend itself to joint development as part of the station. This could include private property, excess CSX property (were it to be available), and SR 836 property. To make it work, pedestrian crossovers, auto access, and maybe more extensive air rights development may be possible.

The end station, as currently contemplated would be around NW 137th Avenue, potentially located on large tracts of vacant, private land. Again, as private land, this would not likely generate joint development revenues. However, it could result in AD or TIF monies if the development were compatible with current or new zoning.

Located in a region with similar density as the Miami metropolitan area, the Boston, MA I-90 air rights development (AR) serves as an example for the Corridor, some time in the future. Boston has had a long-term effort to leverage air rights development along a major highway corridor, I-90, and, in part, a railway corridor. Since the early 1960s, the state government's Massachusetts Turnpike Authority (MTA) developed approximately 23 ARs parcels, including the Prudential Center and the Star Market grocery store (both completed in 1963) and Copley Place is a completed (1986). The former projects helped to redevelop parts of Boston's urban core and the latter project helped to bridge two neighborhoods (the South End and Back Bay), changing the design and character of one of Boston's commercial and residential centers and stimulating economic growth. Built over 9.5 acres constructed over a railroad right-of-way as well as over the turnpike, the Copley Place development included two hotels, an office/retail area, and 900 parking spaces.[1]

While there are distinct technical and regional economic differences between Miami and Boston, this example illustrates that with good planning, including connections to rail and bus stations, the air rights along the Corridor could generate significant development in the future, yielding monies in terms of joint development (probably in close connection with MDX) and/or from AD or TIF monies.

Development that includes air rights could make the real estate development expensive. Depending on the dynamics of the local and overall Miami-Dade real estate market, this would more or less affect the competitiveness of this development. Superior commuter rail service, the scarcity of developable land in the County, and the County's increasing population growth, however, could negate the impact of these additional costs.

4 Parking and Parking Increments

The previous 2013 report titled, *Applying Innovative Financing Options for a New Fixed-Route Transit Line in Miami-Dade County,* evaluated how the County could impose a "parking increment" or parking surcharge on spaces at existing public and private parking facilities in Downtown Miami. Even though there is major structured parking at MIA and surface parking at the Miami International Mall and Dolphin Mall, a parking surcharge could not likely be imposed on these spaces since these facilities are located either in unincorporated County property or in jurisdictions with populations of less than 200,000 (Doral and Sweetwater), the threshold below which jurisdictions may impose such charges, per state law.

[1] For more information, see: Vadali, S. (2014). *Using the Economic Value Created by Transportation to Fund Transportation*: NCHRP 459, pp. 37 to 40 at http://www.trb.org/Main/Blurbs/170750.aspx

Land at and around proposed stations should be available for surface and structured parking. As in other rail stations and park and rides, a parking fee would be appropriate. As mentioned, limited surface spaces may be available under SR 836 in certain locations, although further technical analysis would be needed.

5 Assessment District and Tax Increment Financing

This section discusses the results of the real estate value capture analysis, including assessment districts (ADs) and tax increment financing (TIF) for the Corridor. Specifically, three value capture techniques were analyzed:

- AD1 – This assessment district is based on annual *ad valorem* assessment on property assessment values;
- AD2 – This assessment district is based on a specific annual assessment on the projected total floor area; and
- TIF – Tax increment financing is based on *ad valorem* annual assessment on incremental property assessment values and incremental floor area development. TIF estimates are prepared for both countywide millage (County TIF), and city and unincorporated municipal services area (UMSA) millage rates (City/UMSA TIF).

Value capture revenues can be used to fund transit improvements either as: (i) debt service for bonds issued to finance capital costs or (ii) availability payments for the delivery of the transit projects under a public-private partnership. Funding both of these options are addressed in this analysis. Additionally, value capture revenues may also be used for funding on a pay-as-you-go basis, which is not the focus of this analysis.

5.1 Methodology, Assumptions, and Limitations

Previously, the Team developed two value capture analyses for CITT in 2013 and 2014. Detailed methodology for value capture analysis is explained in the 2013 report titled *Applying Innovative Financing Options for a New Fixed-Route Transit Line in Miami-Dade County*. The report can be accessed on CITT's website.[2] Key elements of the methodology and assumptions are highlighted below.

While AD1 and AD2 are applied to commercial, office, industrial, and mixed use properties, TIF relies on incremental tax revenues from all current tax paying properties including residential properties. Properties under government and public use – such as government buildings, utilities, water bodies, public parks, and cemetery – are excluded from both ADs and TIFs.

Value capture is applied to properties within a half-mile and one-mile areas along each side of the Corridor. Table 1 provides an overview of the floor area and property assessment valuation,

[2] Please see: http://www.miamidade.gov/citt/strategic-financial-studies.asp

which is the basis for the value capture estimates in the half-mile area. Information on the one-mile area including value capture estimates is provided in Annex 1.

Table 1: Summary of Current (2015) Property Assessment Value and Floor Area for the Corridor

Land Use Category	*Property Assessment Value ($M)*	*Percent of Property Assessment Value*	*Floor Area* (Millions of Square Feet)*	*Percent of Floor Area*
Commercial	1,885	31.67%	17.18	28.06%
Office	643	10.80%	7.44	12.15%
Industrial	151	2.54%	2.33	3.81%
Other	157	2.64%	1.24	2.03%
Residential	2,185	36.71%	27.39	44.73%
Government/Public Use	932	15.66%	5.64	9.22%
Total	**5,952**	**100.00%**	**61.23**	**100.00%**

***** Parcels without assessment value such as canals, streets and roads, transit and railroad properties, canals and waterways, etc. have been excluded.

The key assumptions used in developing the value capture estimates are as follows:

- AD1 is based on assessments of $0.10, $0.20, and $0.50 (also known as millage rates) for $1,000 of property assessment value and AD2 is based on assessments $0.10, $0.20, and $0.50 per square foot of floor area.
- TIF estimates are based on Miami-Dade County's 2015 adopted millage rates.[3] Countywide millage applied for the County TIF is $4.6669, and City and UMSA millage rates[4] applied for the City/UMSA TIF is $2.5766. Fifty percent (50%) of the incremental tax revenue is assumed to be available for transit funding.
- The value premium from transit development is assumed to be is 10% of land value. The value premium of 10% is assumed to be realized equally over the 30 years of analysis.
- Estimates are based on 50% realization of the total potential of future floor area development. For instance, if a property can develop up to an additional floor area ratio (FAR) of 2, the analysis assumes that only 1 additional FAR is actually developed.
- There are three growth scenarios for future floor area development: (i) slow growth - 50% of future development in 25 years; (ii) medium growth - 50% of future development in 15 years; and (iii) fast growth - 50% of new development in 5 years.

None of the value capture mechanisms *inherently* generates more revenue than the other. Changing the various assumptions can alter the projected estimates. For instance, in the case of AD1, by increasing the assessment from $0.10 to $0.20 for every $1,000 of property assessment value, the estimates will also increase in the same proportion (i.e. double). Similarly, TIF estimates increase if the share of TIF revenues available for transit improvements

[3] Please see: http://www.miamidade.gov/pa/library/2015-adopted-millage-chart.pdf

[4] The Corridor passes through several cities and UMSA. The city/UMSA millage of $2.5766 is a weighted average of the city and UMSA millage rates. The millage rates and assumed percentage of cities and UMSA in the Corridor are as follows: Doral ($1.9000, 20%), Miami ($7.6465, 10%), Sweetwater ($2.7493, 10%), and UMSA ($1.9283, 60%).

is increased. Additionally, the characteristics of the analysis area impact the extent of value capture revenues. In an area that is already extensively developed with lower potential for incremental development, TIF estimates will be lower than AD estimates. Between AD1 and AD2, an area with relatively higher property assessment valuation will result in more revenues in contrast to AD2.

It is also important to remember that property valuation and rates of development are difficult to predict with accuracy because of external economic changes, such as a recession. Changes in the assumed rate of growth in property values and the time it takes to reach the maximum FAR may alter the estimates. For this reason, several growth scenarios are used to derive the estimates. Finally, the estimates are based on best available land use, zoning, and property assessment valuation information received in mid-2015. If there are corrections or changes made to the data, it could alter the estimates.

5.2 Bonding of Future Incremental Value Capture Revenues

The issuance of bonds based on the incremental value capture revenues assumes that bond issuance occurs at specific intervals. That is, once a certain level of value capture revenues is achieved, bonds are issued backed by those value capture revenues. Relying on incremental revenues to issue bonds reduces the uncertainty of the underlying revenue stream, as uncertainty is restricted only to achieving incremental revenues. ADs rely less on future growth than TIFs as they are capable of generating revenues from the initial year (Current Year). TIF revenues, on the other hand, rely on future growth even for initial revenue flow. Future growth supporting TIF revenues can be the result of new floor area development and/or increase in property assessment valuation through the accrual of value premium which only may occur several years after the transit project is completed.

Table 2: Summary AD1 Bond Issuance Capacity ($)

Growth Scenario	Year	Incremental Bond Issuance Capacity ($)	Incremental Revenue ($)
$0.10 / $1000 of Property Assessment Value			
Slow Growth	Current Year	6,227,924	502,724
	Year 5	970,773	78,362
	Year 10	828,394	66,869
	Total	**8,027,092**	-
Medium Growth	Current Year	6,227,924	502,724
	Year 5	1,499,306	121,025
	Year 10	1,356,926	109,532
	Total	**9,084,157**	-
Fast Growth	Current Year	6,227,924	502,724
	Year 5	4,141,969	334,344
	Year 10	828,394	66,869
	Total	**11,198,287**	-
$0.20 / $1000 of Property Assessment Value			
Slow Growth	Current Year	12,455,849	1,005,449
	Year 5	1,941,547	156,724
	Year 10	1,656,787	133,738
	Total	**16,054,183**	-
Medium Growth	Current Year	12,455,849	1,005,449
	Year 5	2,998,612	242,051
	Year 10	2,713,852	219,065
	Total	**18,168,313**	-
Fast Growth	Current Year	12,455,849	1,005,449
	Year 5	8,283,937	668,688
	Year 10	1,656,787	133,738
	Total	**22,396,573**	-
$0.50 / $1000 of Property Assessment Value			
Slow Growth	Current Year	31,139,622	2,513,622
	Year 5	4,853,867	391,809
	Year 10	4,141,969	334,344
	Total	**40,135,458**	-
Medium Growth	Current Year	31,139,622	2,513,622
	Year 5	7,496,530	605,127
	Year 10	6,784,631	547,662
	Total	**45,420,783**	-
Fast Growth	Current Year	31,139,622	2,513,622
	Year 5	20,709,843	1,671,719
	Year 10	4,141,969	334,344
	Total	**55,991,434**	-

Table 3: Summary AD2 Bond Issuance Capacity ($)

Growth Scenario	Year	Incremental Bond Issuance Capacity ($)	Incremental Revenue ($)
$0.10 / $1000 of Property Assessment Value			
Slow Growth	Current Year	34,931,274	2,819,688
	Year 5	9,351,424	754,856
	Year 10	9,351,424	754,856
	Total	**53,634,121**	-
Medium Growth	Current Year	34,931,274	2,819,688
	Year 5	15,585,706	1,258,094
	Year 10	15,585,706	1,258,094
	Total	**66,102,686**	-
Fast Growth	Current Year	34,931,274	2,819,688
	Year 5	46,757,119	3,774,282
	Year 10	9,351,424	754,856
	Total	**91,039,816**	-
$0.20 / $1000 of Property Assessment Value			
Slow Growth	Current Year	69,862,548	5,639,376
	Year 5	18,702,847	1,509,713
	Year 10	18,702,847	1,509,713
	Total	**107,268,243**	-
Medium Growth	Current Year	69,862,548	5,639,376
	Year 5	31,171,412	2,516,188
	Year 10	31,171,412	2,516,188
	Total	**132,205,373**	-
Fast Growth	Current Year	69,862,548	5,639,376
	Year 5	93,514,237	7,548,564
	Year 10	18,702,847	1,509,713
	Total	**182,079,633**	-
$0.50 / $1000 of Property Assessment Value			
Slow Growth	Current Year	174,656,369	14,098,439
	Year 5	46,757,119	3,774,282
	Year 10	46,757,119	3,774,282
	Total	**268,170,607**	-
Medium Growth	Current Year	174,656,369	14,098,439
	Year 5	77,928,531	6,290,470
	Year 10	77,928,531	6,290,470
	Total	**330,513,432**	-
Fast Growth	Current Year	174,656,369	14,098,439
	Year 5	233,785,594	18,871,410
	Year 10	46,757,119	3,774,282
	Total	**455,199,081**	-

Table 4: Summary County TIF Bond Issuance Capacity ($)

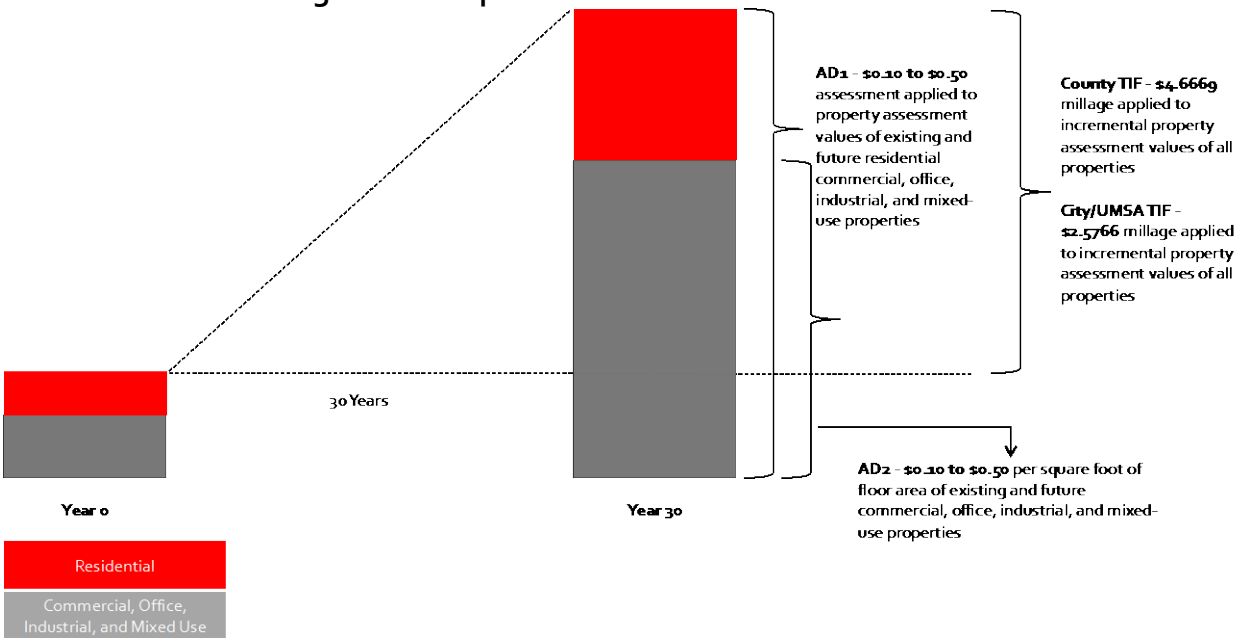
Growth Scenario	*Year*	*Incremental Bond Issuance Capacity ($)*	*Incremental Revenue ($)*
50% Revenues for Transit Funding			
Slow Growth	Current Year	-	-
	Year 5	85,084,226	6,868,085
	Year 10	81,794,656	6,602,548
	Total	**166,878,882**	**-**
Medium Growth	Current Year	-	-
	Year 5	139,060,271	11,225,086
	Year 10	135,770,701	10,959,548
	Total	**274,830,972**	**-**
Fast Growth	Current Year	-	-
	Year 5	408,940,494	33,010,091
	Year 10	81,794,656	6,602,548
	Total	**490,735,150**	**-**
100% Revenues for Transit Funding			
Slow Growth	Current Year	-	-
	Year 5	170,168,452	13,736,170
	Year 10	163,589,313	13,205,095
	Total	**333,757,765**	-
Medium Growth	Current Year	-	-
	Year 5	278,120,541	22,450,172
	Year 10	271,541,402	21,919,097
	Total	**549,661,943**	-
Fast Growth	Current Year	-	-
	Year 5	817,880,987	66,020,182
	Year 10	163,589,313	13,205,095
	Total	**981,470,300**	-

Table 5: Summary UMSA TIF Bond Issuance Capacity ($)

Growth Scenario	Year	Incremental Bond Issuance Capacity ($)	Incremental Revenue ($)
50% Revenues for Transit Funding			
Slow Growth	Current Year	-	-
	Year 5	46,974,354	3,791,817
	Year 10	45,158,208	3,645,216
	Total	**92,132,562**	**-**
Medium Growth	Current Year	-	-
	Year 5	76,774,118	6,197,285
	Year 10	74,957,972	6,050,683
	Total	**151,732,089**	**-**
Fast Growth	Current Year	-	-
	Year 5	225,772,937	18,224,620
	Year 10	45,158,208	3,645,216
	Total	**270,931,145**	**-**
100% Revenues for Transit Funding			
Slow Growth	Current Year	-	-
	Year 5	93,948,708	7,583,635
	Year 10	90,316,416	7,290,433
	Total	**184,265,124**	-
Medium Growth	Current Year	368,530,248	-
	Year 5	153,548,236	12,394,569
	Year 10	149,915,943	12,101,367
	Total	**303,464,179**	-
Fast Growth	Current Year	606,928,358	-
	Year 5	451,545,873	36,449,240
	Year 10	90,316,416	7,290,433
	Total	**541,862,289**	-

In the above tables, TIF revenues are significantly higher than AD1. This is because the Corridor's current real estate development is sparse, which implies that transit facilities could potentially lead to significant new real estate development. Additionally, while AD1 is based on assessment ranging from $0.10 to $0.50, County TIF is based on a countywide millage of $4.6669 and City/USMA TIF is based on weighted average millage of $2.5766. The figure below provides a graphic illustration of the reason for higher the TIF estimate compared to AD1. On the other hand, AD2 estimates cannot be compared to AD1 and TIF estimates, as the former is based on assessment on the floor area while the latter are based on property assessment valuation.

Figure 8: Comparison of AD1 and TIF Calculations



5.3 Annual Value Capture Revenues for Availability Payments

Instead of bonding future revenues, policymakers can choose to use the value capture revenues to make availability (or annuity) payments for the delivery of transit projects. Availability payments are generally fixed annual payments subject to agreed indexation. Value capture revenues are, however, not fixed throughout the analysis period, and fall within a broad range given the upward growth assumptions in the estimation of value capture revenues. The range is much narrower for ADs compared to TIFs. Tables 6-9 provide a summary of the actual value capture revenues from the various value capture techniques at certain periodic intervals. While Year 10 and Year 30 estimates are relevant, realistically, earlier estimates (Current Year and Year 5) are more relevant for the sizing of availability payments. Since availability payments are fixed payments, uncertain future value captures revenues that are contingent on real estate growth and/or increases in property valuation cannot be the basis for determining availability payments.

Table 6: Range of Annual AD1 Revenues ($)

Growth Scenario	Current Year	Year 5	Year 10	Year 30
$0.10 / $1000 of Property Assessment Value				
Slow Growth	502,724	581,086	647,955	1,171,412
Medium Growth	502,724	623,750	733,282	1,171,412
Fast Growth	502,724	837,068	903,937	1,171,412
$0.20 / $1000 of Property Assessment Value				
Slow Growth	1,005,449	1,162,172	1,295,910	2,342,824
Medium Growth	1,005,449	1,247,500	1,466,565	2,342,824
Fast Growth	1,005,449	1,674,137	1,807,874	2,342,824
$0.50 / $1000 of Property Assessment Value				
Slow Growth	2,513,622	2,905,431	3,239,775	5,857,061
Medium Growth	2,513,622	3,118,749	3,666,412	5,857,061
Fast Growth	2,513,622	4,185,341	4,519,685	5,857,061

Table 7: Range of Annual AD2 Revenues ($)

Growth Scenario	Current Year	Year 5	Year 10	Year 30
$0.10 / Square Foot of Floor Area				
Slow Growth	2,819,688	3,574,544	4,329,401	10,368,252
Medium Growth	2,819,688	4,077,782	5,335,876	10,368,252
Fast Growth	2,819,688	6,593,970	7,348,826	10,368,252
$0.20 / Square Foot of Floor Area				
Slow Growth	5,639,376	7,149,088	8,658,801	20,736,504
Medium Growth	5,639,376	8,155,564	10,671,752	20,736,504
Fast Growth	5,639,376	13,187,940	14,697,652	20,736,504
$0.50 / Square Foot of Floor Area				
Slow Growth	14,098,439	17,872,721	21,647,003	51,841,259
Medium Growth	14,098,439	20,388,909	26,679,379	51,841,259
Fast Growth	14,098,439	32,969,849	36,744,131	51,841,259

Table 8: Range of Annual County TIF Revenues ($)

Growth Scenario	Current Year	Year 5	Year 10	Year 30
50% Revenues for Transit Funding				
Slow Growth	-	6,868,085	13,470,632	66,022,828
Medium Growth	-	11,225,086	22,184,634	66,022,828
Fast Growth	-	33,010,091	39,612,638	66,022,828
100% Revenues for Transit Funding				
Slow Growth	-	13,736,170	26,941,265	132,045,657
Medium Growth	-	22,450,172	44,369,269	132,045,657
Fast Growth	-	66,020,182	79,225,277	132,045,657

Table 9: Range of Annual UMSA TIF Revenues ($)

Growth Scenario	Current Year	Year 5	Year 10	Year 30
50% Revenues for Transit Funding				
Slow Growth	-	3,791,817	7,437,034	36,450,701
Medium Growth	-	6,197,285	12,247,968	36,450,701
Fast Growth	-	18,224,620	21,869,836	36,450,701
100% Revenues for Transit Funding				
Slow Growth	-	7,583,635	14,874,067	72,901,403
Medium Growth	-	12,394,569	24,495,936	72,901,403
Fast Growth	-	36,449,240	43,739,673	72,901,403

6 Naming Rights

Transit agencies have been able to enter into agreements with third parties to name their facilities in exchange for an upfront or on-going consideration. The major agreements in the U.S. so far have primarily involved hospitals or universities—in Cleveland and San Diego. Also, in Florida, Tampa's electric company, Tampa Electric Company, bought the naming rights for an historic streetcar.

With increased competition, hospitals are looking to increase their brand recognition. Furthermore, hospital complexes are enormous activity generators attracting patients, visitors, doctors, nurses and other staff to a relatively concentrated area of a city. To a similar extent, universities are also seeking increased exposure in the community and also generate traffic, depending on the nature of the university and how its campuses are configured.

Miami is home to a number of major universities, including:

- Florida International University (FIU);
- Miami Dade College; and
- University of Miami.

and hospitals:

- Baptist;
- Jackson Memorial Hospital;
- Mercy;
- Mount Sinai Medical Center; and
- University of Miami.

The major university that is closest to the alignment is FIU, approximately one-mile south from the end of the Corridor. While there have been alternative plans to link FIU to the alignment, that connection is not part of the current plans. There are also plans to link FIU to potential bus rapid transit or express bus as discussed in Section 3.1.4.

The other hospital facility in the Corridor is Alsac St Jude Children's Research Hospital. While this hospital could be interested as a sponsor, it is not a major hospital facility like the Jackson Memorial Hospital located off of SR 836.

Other prominent organizations in the South Florida could show an interest in naming rights, as American Airlines and BB&T have for sports and entertainment facilities in Miami-Dade and Broward Counties, respectively.

7 Impact Fees

Under the County Chapter 33E, the County imposes impact fees on new construction of industrial, residential, institutional, office, retail, and other commercial services facilities.[5] The road impact fees were primarily dedicated to fund County roads. However, those fees can be used to fund mass transit projects, such as commuter rail as contemplated in the Corridor.

The Board of County Commissioners is currently evaluating a new ordinance expanding the flexibility of impact fee uses.[6] In particular, it would allow:

- The funding of mass transit projects outside the Urban Infill Area;
- The use of multiple road impact fee funds if the mass transit project benefits multiple impact fee districts; and
- County powers to take on projects with impact fees with less consultation required from the Mayor and the Director of the Department of Public Works and Waste Management.

Such a measure may be beneficial to the Corridor, depending on whether the western end of the Corridor is located outside of the Urban Infill Area. Greater access to and flexibility in applying impact fees can also be beneficial to the funding opportunities for the Corridor.

These impact fees, however, are not expected to yield the same revenues as the AD and TIF value capture mechanisms discussed in Section 0, since they are:

- One-time, non-recurring fees—much of the Corridor has been built out, although as discussed in Section 0, greater densities are foreseeable; and
- Not solely available to fund transit improvements—it is unlikely that all fees in an impact fee district could be applied towards transit improvements, since the fees may need to fund other transport needs.

8 Financial Support from Miami-Dade Expressway Authority

Another potential funding source for the East-West Corridor project could come from MDX. MDX is the operator of five expressways in Miami-Dade County, including the Dolphin (SR

[5] See: http://www.miamidade.gov/zoning/library/fees/impact-fee-schedule-2015-10-01.pdf.
[6] Memo from Carlos A. Gimenez to the Honorable Chairman Monestine and Members, Board of County Commissioners, "Ordinance Relating to Road Impact Fees Providing for Use of Impact Fees to Pay for Mass Transit Projects that Benefit Multiple Impact Fee Districts," November 17, 2015.

836). The Dolphin Expressway is a 15-mile six-lane divided highway from Southwest 137th Avenue to downtown Miami. It is MDX's largest revenue generator with toll revenues of $97.7M in Fiscal Year 2015[7], approximately 53% of MDX's total toll and fee revenue in that year.

A number of major U.S. transit systems benefit from surpluses provided by sibling toll road or bridge agencies to pay for operating and capital costs. This includes agencies serving the New York, Philadelphia, San Francisco, and Washington, D.C. regions.[8] The level of the contribution from sibling transportation agencies varies according to the financials of the agencies, the requirements of the transit systems, and local policy requirements.

The justification for this support includes the benefits of improved air quality, safety, social mobility, and road congestion reduction. If MDX were to provide funding of 5% of the Dolphin Expressway annual gross revenues, this would generate $4.9M in 2015. Using the same financial assumptions utilized for the AD1, AD2 and TIF, this would yield a bondable amount of $60.5M. The table below shows potential MDX support at other percentages of Dolphin Expressway's revenues.

Table 10: Corridor Bond Issuance Amounts

Percentage of Dolphin Expressway Gross Annual Revenues	*Bond Issuance Amount ($2016 M)*	*Range of Annual Revenues (M)*
1%	$12	$1
3%	$36	$3
5%	$61	$5
10%	$121	$10

[7] Miami-Dade County Expressway Authority, 2015 Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2015.
[8] This includes the Metropolitan Transportation Authority (New York), Port Authority Transit Corporation (Philadelphia Region), Bay Area Rapid Transit (San Francisco), and the Washington Metropolitan Transportation Authority (Washington, D.C. region).

Annex 1: Information on One-Mile Area Along the Corridor

Table 11: Summary of Current (2015) Property Assessment Value and Floor Area for the Corridor

Land Use Category	*Property Assessment Value ($M)*	*Percent of Property Assessment Value*	*Floor Area* (Millions of Square Feet)*	*Percent of Floor Area*
Commercial	4,118	34.16%	41.45	32.94%
Office	1,099	9.12%	12.26	9.74%
Industrial	315	2.61%	4.70	3.73%
Other	311	2.58%	2.60	2.06%
Residential	4,445	36.88%	54.03	42.94%
Government/Public Use	1,764	14.64%	10.80	8.58%
Total	**12,053**	**100.00%**	**125.83**	**100.00%**

***** Parcels without assessment value such as canals, streets and roads, transit and railroad properties, canals and waterways, etc. have been excluded.

The key assumptions used in developing the value capture estimates are as follows:

- AD1 is based on assessments of $0.10, $0.20, and $0.50 (also known as millage rates) for $1,000 of property assessment value and AD2 is based on assessments $0.10, $0.20, and $0.50 per square foot of floor area.
- TIF estimates are based on Miami-Dade County's 2015 adopted millage rates.[9] Countywide millage applied for the County TIF is $4.6669, and city and UMSA millage rates[10] applied for the City/UMSA TIF is $2.5766. Fifty percent (50%) of the incremental tax revenue is assumed to be available for transit funding.
- The value premium from transit development is assumed to be is 10% of land value. The value premium of 10% is assumed to be realized equally over the 30 years of analysis.
- Estimates are based on 50% realization of the total potential of future floor area development. For instance, if a property can develop up to an additional floor area ratio (FAR) of 2, the analysis assumes that only 1 additional FAR is actually developed.
- There are three growth scenarios for future floor area development: (i) slow growth – 50% of future development in 25 years; (ii) medium growth – 50% of future development in 15 years; and (iii) fast growth – 50% of new development in 5 years.

[9] Please see: http://www.miamidade.gov/pa/library/2015-adopted-millage-chart.pdf

[10] The Corridor passes through several cities and UMSA. The city/UMSA millage of $2.5766 is a weighted average of the city and UMSA millage rates. The millage rates and assumed percentage of cities and UMSA in the Corridor are as follows: Doral ($1.9000, 20%), Miami ($7.6465, 10%), Sweetwater ($2.7493, 10%), and UMSA ($1.9283, 60%). The percentages are based on expert judgment.

Table 12: Summary AD1 Bond Issuance Capacity ($)

Growth Scenario	Year	Incremental Bond Issuance Capacity ($)	Incremental Revenue ($)
$0.10 / $1000 of Property Assessment Value			
Slow Growth	Current Year	12,783,820	1,031,923
	Year 5	1,071,137	86,463
	Year 10	781,682	63,098
	Total	**14,636,639**	-
Medium Growth	Current Year	12,783,820	1,031,923
	Year 5	1,544,016	124,635
	Year 10	1,254,561	101,269
	Total	**15,582,396**	-
Fast Growth	Current Year	12,783,820	1,031,923
	Year 5	3,908,409	315,491
	Year 10	781,682	63,098
	Total	**17,473,911**	-
$0.20 / $1000 of Property Assessment Value			
Slow Growth	Current Year	25,567,640	2,063,846
	Year 5	2,142,274	172,927
	Year 10	1,563,364	126,196
	Total	**29,273,277**	-
Medium Growth	Current Year	25,567,640	2,063,846
	Year 5	3,088,032	249,269
	Year 10	2,509,121	202,539
	Total	**31,164,792**	-
Fast Growth	Current Year	25,567,640	2,063,846
	Year 5	7,816,819	630,982
	Year 10	1,563,364	126,196
	Total	**34,947,822**	-
$0.50 / $1000 of Property Assessment Value			
Slow Growth	Current Year	63,919,099	5,159,614
	Year 5	5,355,685	432,316
	Year 10	3,908,409	315,491
	Total	**73,183,194**	-
Medium Growth	Current Year	63,919,099	5,159,614
	Year 5	7,720,079	623,173
	Year 10	6,272,803	506,347
	Total	**77,911,981**	-
Fast Growth	Current Year	63,919,099	5,159,614
	Year 5	19,542,046	1,577,454
	Year 10	3,908,409	315,491
	Total	**87,369,555**	-

Table 13: Summary AD2 Bond Issuance Capacity ($)

Growth Scenario	Year	Incremental Bond Issuance Capacity ($)	Incremental Revenue ($)
$0.10 / Square Foot of Floor Area			
Slow Growth	Current Year	34,931,274	2,819,688
	Year 5	9,351,424	754,856
	Year 10	9,351,424	754,856
	Total	**53,634,121**	-
Medium Growth	Current Year	34,931,274	2,819,688
	Year 5	15,585,706	1,258,094
	Year 10	15,585,706	1,258,094
	Total	**66,102,686**	-
Fast Growth	Current Year	34,931,274	2,819,688
	Year 5	46,757,119	3,774,282
	Year 10	9,351,424	754,856
	Total	**91,039,816**	-
$0.20 / Square Foot of Floor Area			
Slow Growth	Current Year	69,862,548	5,639,376
	Year 5	18,702,847	1,509,713
	Year 10	18,702,847	1,509,713
	Total	**107,268,243**	-
Medium Growth	Current Year	69,862,548	5,639,376
	Year 5	31,171,412	2,516,188
	Year 10	31,171,412	2,516,188
	Total	**132,205,373**	-
Fast Growth	Current Year	69,862,548	5,639,376
	Year 5	93,514,237	7,548,564
	Year 10	18,702,847	1,509,713
	Total	**182,079,633**	-
$0.50 / Square Foot of Floor Area			
Slow Growth	Current Year	174,656,369	14,098,439
	Year 5	46,757,119	3,774,282
	Year 10	46,757,119	3,774,282
	Total	**268,170,607**	-
Medium Growth	Current Year	174,656,369	14,098,439
	Year 5	77,928,531	6,290,470
	Year 10	77,928,531	6,290,470
	Total	**330,513,432**	-
Fast Growth	Current Year	174,656,369	14,098,439
	Year 5	233,785,594	18,871,410
	Year 10	46,757,119	3,774,282
	Total	**455,199,081**	-

Table 14: Summary County TIF Bond Issuance Capacity ($)

Growth Scenario	Year	Incremental Bond Issuance Capacity ($)	Incremental Revenue ($)
50% Revenues for Transit Funding			
Slow Growth	Current Year	-	-
	Year 5	90,707,319	7,321,987
	Year 10	84,043,297	6,784,060
	Total	**174,750,615**	**-**
Medium Growth	Current Year	-	-
	Year 5	145,610,467	11,753,824
	Year 10	138,946,445	11,215,898
	Total	**284,556,913**	**-**
Fast Growth	Current Year	-	-
	Year 5	420,126,211	33,913,013
	Year 10	84,043,297	6,784,060
	Total	**504,169,508**	**-**
100% Revenues for Transit Funding			
Slow Growth	Current Year	-	-
	Year 5	181,414,637	14,643,973
	Year 10	168,086,593	13,568,120
	Total	**349,501,230**	**-**
Medium Growth	Current Year	-	-
	Year 5	291,220,935	23,507,649
	Year 10	277,892,891	22,431,796
	Total	**569,113,825**	**-**
Fast Growth	Current Year	-	-
	Year 5	840,252,423	67,826,027
	Year 10	168,086,593	13,568,120
	Total	**1,008,339,016**	**-**

Table 15: Summary UMSA TIF Bond Issuance Capacity ($)

Growth Scenario	*Year*	*Incremental Bond Issuance Capacity ($)*	*Incremental Revenue ($)*
50% Revenues for Transit Funding			
Slow Growth	Current Year	-	-
	Year 5	50,078,821	4,042,413
	Year 10	46,399,665	3,745,428
	Total	**96,478,486**	**7,787,841**
Medium Growth	Current Year	-	-
	Year 5	80,390,432	6,489,197
	Year 10	76,711,276	6,192,212
	Total	**157,101,708**	**12,681,409**
Fast Growth	Current Year	-	-
	Year 5	231,948,486	18,723,117
	Year 10	46,399,665	3,745,428
	Total	**278,348,151**	**22,468,545**
100% Revenues for Transit Funding			
Slow Growth	Current Year	-	-
	Year 5	100,157,642	8,084,826
	Year 10	92,799,330	7,490,856
	Total	**192,956,971**	**-**
Medium Growth	Current Year	-	-
	Year 5	160,780,864	12,978,394
	Year 10	153,422,552	12,384,424
	Total	**314,203,415**	**-**
Fast Growth	Current Year	-	-
	Year 5	463,896,973	37,446,233
	Year 10	92,799,330	7,490,856
	Total	**556,696,303**	**-**

Table 16: Range of Annual AD1 Revenues ($)

Growth Scenario	Current Year	Year 5	Year 10	Year 30
$0.10 / $1000 of Property Assessment Value				
Slow Growth	1,031,923	1,118,386	1,181,484	1,662,904
Medium Growth	1,031,923	1,156,557	1,257,827	1,662,904
Fast Growth	1,031,923	1,347,414	1,410,512	1,662,904
$0.20 / $1000 of Property Assessment Value				
Slow Growth	2,063,846	2,236,772	2,362,969	3,325,809
Medium Growth	2,063,846	2,313,115	2,515,654	3,325,809
Fast Growth	2,063,846	2,694,827	2,821,024	3,325,809
$0.50 / $1000 of Property Assessment Value				
Slow Growth	5,159,614	5,591,931	5,907,422	8,314,522
Medium Growth	5,159,614	5,782,787	6,289,134	8,314,522
Fast Growth	5,159,614	6,737,068	7,052,559	8,314,522

Table 17: Range of Annual AD2 Revenues ($)

Growth Scenario	Current Year	Year 5	Year 10	Year 30
$0.10 / Square Foot of Floor Area				
Slow Growth	6,100,175	7,799,203	9,498,230	23,090,448
Medium Growth	6,100,175	8,931,887	11,763,599	23,090,448
Fast Growth	6,100,175	14,595,311	16,294,339	23,090,448
$0.20 / Square Foot of Floor Area				
Slow Growth	12,200,351	15,598,405	18,996,459	46,180,895
Medium Growth	12,200,351	17,863,775	23,527,199	46,180,895
Fast Growth	12,200,351	29,190,623	32,588,677	46,180,895
$0.50 / Square Foot of Floor Area				
Slow Growth	30,500,877	38,996,013	47,491,149	115,452,238
Medium Growth	30,500,877	44,659,437	58,817,997	115,452,238
Fast Growth	30,500,877	72,976,557	81,471,693	115,452,238

Table 18: Range of Annual County TIF Revenues ($)

Growth Scenario	Current Year	Year 5	Year 10	Year 30
50% Revenues for Transit Funding				
Slow Growth	-	7,321,987	14,106,047	67,833,313
Medium Growth	-	11,753,824	22,969,722	67,833,313
Fast Growth	-	33,913,013	40,697,073	67,833,313
100% Revenues for Transit Funding				
Slow Growth	-	14,643,973	28,212,093	135,666,627
Medium Growth	-	23,507,649	45,939,444	135,666,627
Fast Growth	-	67,826,027	81,394,147	135,666,627

Table 19: Range of Annual UMSA TIF Revenues ($)

Growth Scenario	Current Year	Year 5	Year 10	Year 30
50% Revenues for Transit Funding				
Slow Growth	-	4,042,413	7,787,841	37,450,256
Medium Growth	-	6,489,197	12,681,409	37,450,256
Fast Growth	-	18,723,117	22,468,545	37,450,256
100% Revenues for Transit Funding				
Slow Growth	-	8,084,826	15,575,682	74,900,513
Medium Growth	-	12,978,394	25,362,818	74,900,513
Fast Growth	-	37,446,233	44,937,089	74,900,513