CSX East-West Corridor

Transit-Oriented Development Study

Final Report

CSX East-West Corridor
Transit-Oriented Development Study Final Report

Submitted for fulfillment of:

GPC VI-7 - TOD Evaluation Along the CSX East-West Rail Corridor

Submitted:
November 2016

Prepared For:

MIAMI-DADE METROPOLITAN PLANNING ORGANIZATION

Prepared By:

WSP | PARSONS BRINCKERHOFF

The preparation of this report has been financed in part from the U.S. Department of Transportation (USDOT) through the Federal Highway Administration (FHWA) and/or the Federal Transit Administration (FTA), the State Planning and Research Program (Section 505 of Title 23, U.S. Code) and Miami-Dade County, Florida. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

Table of Contents

CSX East-West Corridor regional context

Chapter 1
Introduction

Purpose

The purpose of the Transit-Oriented Development (TOD) Evaluation along the CSX East-West Corridor Study is to identify the land use measures necessary to promote TOD at identified station areas located on the Lehigh spur, also known as the CSX East-West Railroad Corridor, in the effort to advance a viable premium transit corridor.

This study serves as a continuation to a previous effort, the CSX East-West Rail Feasibility Study (referred to as the Feasibility Study), completed in March 2016 by the Miami-Dade Metropolitan Planning Organization (MPO). This study examined the feasibility of operating passenger rail service on the CSX East-West Corridor.

Study Advisory Committee

As this study picked up where the feasibility study left off, the same Study Advisory Committee (SAC) was used to provide feedback and corridor insights throughout the study's progress. The SAC was comprised of corridor stakeholders, including representatives from the following:

- City of Doral
- City of Sweetwater
- Miami-Dade County
- Department of Transportation and Public Works (DTPW)
- Miami-Dade Expressway Authority (MDX)
- South Florida Regional Transportation Authority (SFRTA)
- Citizens' Independent Transportation Trust (CITT)

The SAC convened three times for progress updates. The first meeting was a study introduction on March 23, 2016 which tied in to the concluding Feasibility Study. The second meeting was held on May 24, 2016 to appraise members of ongoing efforts and to receive feedback. The final SAC meeting was held on August 23, 2016. At the last meeting, a TOD vision was presented to SAC members. All meetings were held in the CITT conference room at the Stephen P. Clark Center (Government Center) in Downtown Miami.

Planning Context

Past studies of the CSX East-West Corridor have sought to implement a dedicated transit service along the County's east-west axis. One particular effort sought to connect Metrorail to the west side of the County along the Dolphin Expressway (SR 836). In early 2016, the Miami-Dade Metropolitan Planning Organization (MPO) completed the East-West CSX Rail Feasibility Study that identified station stop locations while evaluating the feasibility of commuter rail service on the CSX East-West Corridor. This study was a continuation of previous technical efforts to implement passenger rail service on the existing CSX railroad between the Miami Intermodal Center (MIC) and extending to the western limits of Miami-Dade County.

Building off the most recent effort, this study identifies TOD opportunities that seek to improve the link between existing transit demand and land use development throughout the CSX East-West Corridor at the previously identified stations.

The report is organized in to the following chapters:

Chapter 2 - Corridor Overview & Context discusses the corridor in context of the greater region. It identifies stakeholders and addresses the corridor's urban form and characteristics.

Chapter 3 - Defining the Opportunity introduces the proposed station locations. It provides details on the proposed four (4) areas from the previous feasibility study which are to comprise a starter service. This chapter also discusses an additional three (3) potential station locations. All seven station areas are considered and evaluated for TOD potential.

Chapter 4 - Station Area Profiles contains an in-depth analysis of the seven station areas. It evaluates the character of the stations based upon an analysis of their land use, population and employment densities, and assesses their redevelopment potential.

Chapter 5 - TOD Vision & Organizing Principles explains the TOD framework and discusses organizing principles. The chapter continues with an exploration of conceptual station area improvement plans. These were formed as part of the visioning process that illustrates the TOD potential for the CSX East-West Corridor stations.

Chapter 6 - Economic Potential explores special assessment districts and other financial mechanisms for leveraging increased property values from TOD development to fund transit operations on the CSX East-West Corridor.

Chapter 7 - The Path Forward identifies the next recommended steps for ensuring the vision developed in this plan can evolve from concept to implementation.

Chapter 2
Corridor Overview & Context

The CSX East-West Corridor runs from approximately NW 147th Avenue in the western portion of Miami-Dade County to the Miami Intermodal Center (MIC). The corridor is approximately 11 miles long and currently provides sporadic freight service from west Miami-Dade rock quarries. The rail spur is connected to the Tri-Rail commuter rail service at the MIC. Figure 2.1 depicts the corridor's regional context.

Urban development has expanded significantly in to the western parts of the County in recent decades. This has improved the travel market demand for implementing passenger rail service on the CSX East-West Corridor, which now has the potential to be a vital east-west premium transit link. The corridor will provide service from western Miami-Dade County's major employment centers (Doral, Blue Lagoon, and the Miami International Airport (MIA) area), regional attractors (Dolphin and International Malls), and transportation hubs (the MIC) to the greater South Florida region. Passengers will have access to a variety of additional transportation modes (Metrorail, Metrobus, Tri-Rail, Amtrak) from the corridor's eastern terminus at the MIC. Figure 2.2 depicts the CSX East-West Corridor's relationship to other regional transportation modes.

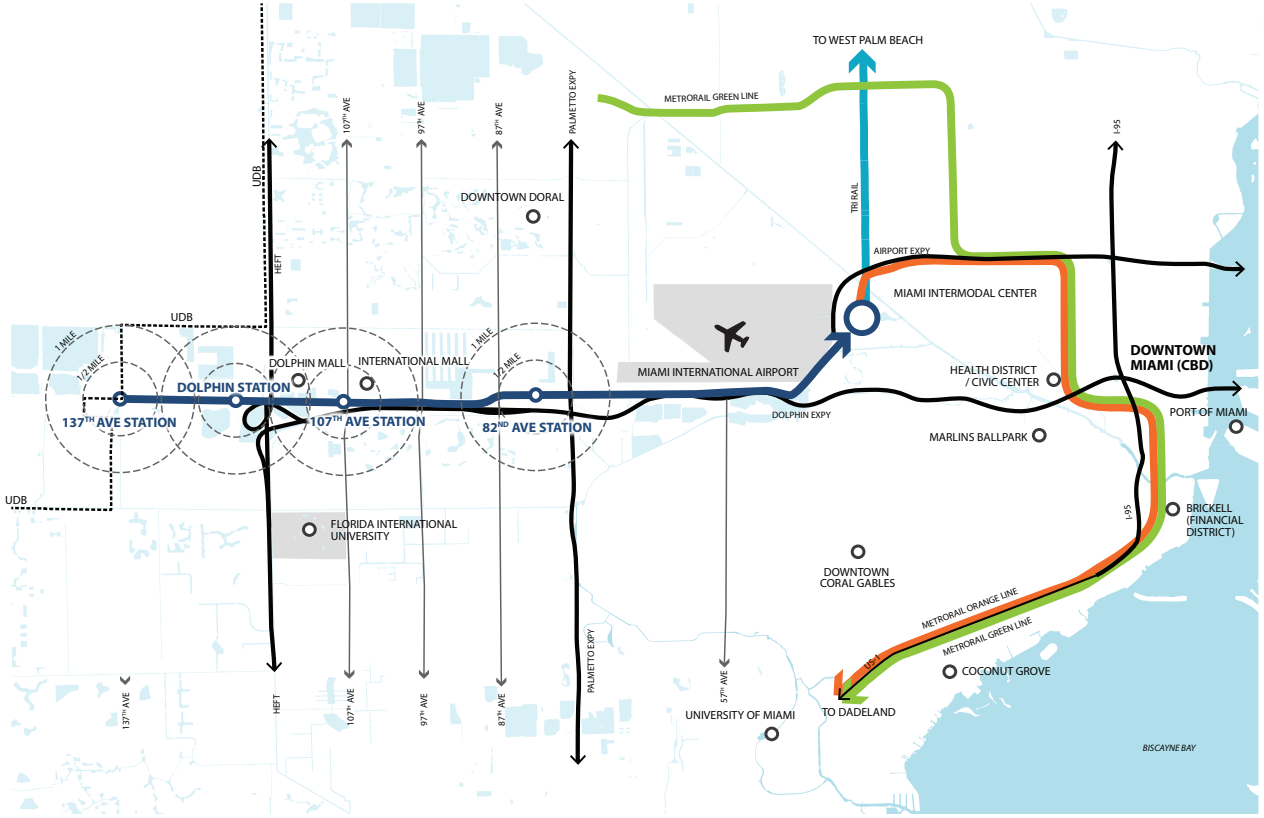


Figure 2.1 - Corridor transportation overview

Corridor Land Use

The land form along the CSX East-West Corridor is predominantly auto-centric. Buildings are generally low rise, infrequently taller than four (4) floors, and are served by adjoining surface parking lots. The land uses are stratified along most of the entire corridor – land uses north of the Dolphin Expressway are overwhelmingly industrial and commercial, while land use on the south side of the corridor is primarily residential.

Single-family homes and low-rise multi-family complexes of medium-densities that adhere to suburban auto-dependent typologies dominate these residential developments. Many of the developments were constructed around man-made lakes and golf courses which created a disconnect from the overall roadway network. This limits pedestrian accessibility and concentrates vehicular flows to major arterials.

Just as residential development is limited to the south side, the north side of the corridor is dominated by industrial warehouse districts and two regional shopping malls. The Corridor provides access to some of the largest employment centers in the region, including Miami International Airport, Doral and Blue Lagoon. The Eastern terminal at the MIC ties the corridor to two additional core employment centers in Downtown Miami, and the Health District. The Corridor provides access and links to each of these trip attractors while also establishing transit continuity to the warehouse districts, which provides a significant revenue base for the City of Doral.

The blocks within the warehouse district are long and provide limited grid connectivity – to the east the grid is restricted by the Palmetto Expressway and the airport runways, while the western side of the corridor is broken up by large retention ponds the Dolphin Expressway ramps, and the Florida Turnpike.

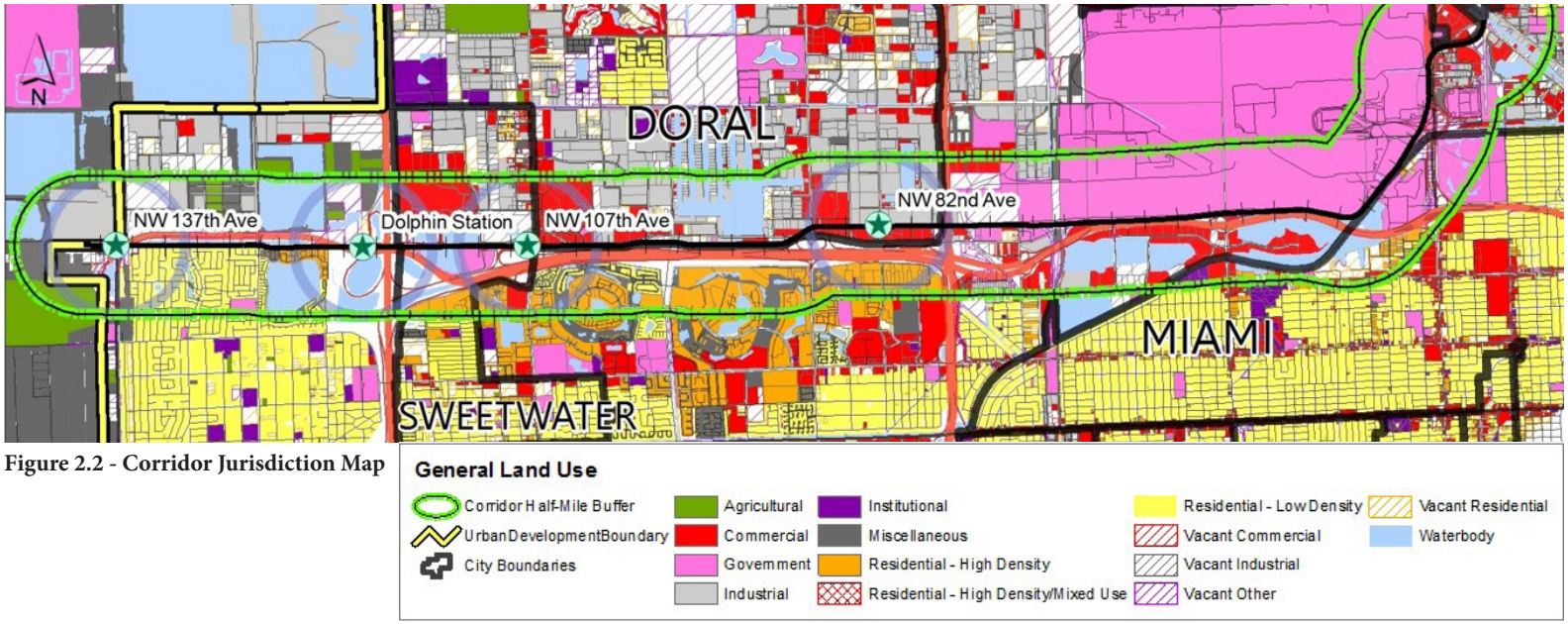


Figure 2.2 - Corridor Jurisdiction Map

Station Area Land Use Policies

The CSX East-West Corridor spans three jurisdictions – Miami–Dade County, the City of Doral and the City of Sweetwater. All have varying policies related to the type and level of development within their boundaries as well as the benefit of various Miami-Dade County land use policies that seek to promote TOD. Florida Department of Transportation (FDOT), Florida Turnpike Enterprise and the Miami-Dade Expressway Authority all have right-of-way close to or abutting the corridor that they seek to preserve for purposes of water conveyance as well as in response to future capital/infrastructure improvements plans.

The NW 82nd Avenue and NW 107th Avenue stations lie within the Cities of Doral and Sweetwater, respectively. Two other stations, NW 137th Avenue and the Dolphin Station are located in unincorporated Miami-Dade County. The City of Miami's municipal limits overlap with the NW 57th Avenue Station location. Figure 2.2 depicts the municipal jurisdiction limits on the CSX East-West Corridor.

Doral

The City of Doral is one of the newest cities in Miami-Dade County. Incorporated in 2003, the City was home to 45,000 residents at the time of the 2010 Census. Doral is bounded by the Dolphin Expressway on the south, the Palmetto Expressway on the east, NW 107th Avenue on the west, and up to NW 58th street to the north.

The City has experienced rapid urbanization in the 1980's which continues today. Most residential development has concentrated in the northwest quadrant of the City, while the southern side of the City has retained its commercial and light industrial character. Downtown Doral continues to grow steadily, keeping a mix of residential, commercial, retail and government uses.

The CSX East-West Corridor runs east-west through the southern end of Doral. Given the concentration of jobs in this part of the City, passenger service on the corridor would provide another link to jobs throughout the area.

Doral operates the Doral Trolley, a municipal transit system funded by the Peoples Transportation Plan (PTP) half penny sales surtax that was adopted in 2002. PTP funding must be used for transportation and transit projects and services. The Doral Trolley complements the Miami-Dade Department of Transportation and Public Works (DTPW) (f/k/a Miami-Dade Transit) transit service within its municipal boundaries and could be used to provide access to the CSX East-West Corridor stations in Doral.

Doral Land Use Policies

Land Use in Doral is governed by two primary documents: the Future Land Use Map located in the Comprehensive Plan, and the Ordinances and Zoning Map of the Planning & Zoning Department. The Future Land Use Map is intended to provide general goals and a vision for the ultimate development of the city, while the Zoning ordinances enact specific regulations which have the force of law.

The Future Land Use designation of the NW 82nd Avenue location is currently Industrial, with one corner of the area designated as Business. The station location itself is zoned Industrial.

The City of Doral utilizes traditional function based zoning code, which regulates buildings into homogenous zones of residential, commercial, industrial uses. The code does allow for Mixed Use Districts, a zoning classification intended to break this rigidity by allowing diverse functions to take place in the same area, or even the same building. There are four subtypes of mixed use districts in Doral, the most relevant to this project being the Downtown Mixed Use District (DMU). While this Zoning classification allows for a TOD, it also has a number of restrictions, expressed in Comprehensive Plan Policy 2.1.2 (Updated 5-2-2016). If the desired TOD can not fit these restrictions, it may be prudent to explore the creation of a new type of Mixed Use District in the City of Doral:

- Minimum site area of 10 acres
- Maximum Residential Density: 25 Dwelling Units per gross Acre (may be granted more by the City Council if the project exhibits creative excellence)
- Maximum Height: 8 stories (may be granted more by the City Council if the project exhibits creative excellence)
- Floor Area Ratio (FAR) limited to 0.5 for first floor and 0.25 for each additional floor above, exclusive of structured parking.

Sweetwater

Sweetwater was incorporated in 1941, and at the time of the 2010 Census, was home to over 13,000 residents. The City is generally bounded by SW 8th Street on the South, and NW 25th Street on the north. The Florida Turnpike makes up the western boundary, and the eastern boundary varies from NW 107th Avenue in the CSX East-West Corridor to SW 102nd Avenue along SW 8th Street.

Sweetwater annexed a large tract of land, including the area on the CSX East-West Corridor in 2010. This increased the population by an additional 7,000 residents and grew the City's economic base – Dolphin Mall and Ikea now fall within the City's limits, contributing to the City's tax base.

Sweetwater operates a municipal transit system which will be merged with Florida International University's (FIU) circulator services. The combined service will be referred to as the University City Transportation and Management Association of Sweetwater and will integrate the transit services to improve cost effectiveness and efficiency. This partnership between FIU and Sweetwater can provide a direct and convenient link from the CSX East-West Corridor to Sweetwater and the FIU Campus once rail operations commence.

Sweetwater Land Use Policies

Land Use in Sweetwater is governed by the Future Land Use Map located in the Sweetwater Comprehensive Plan, and the Ordinances and Zoning Map of the Building & Zoning Department. The Future Land Use Map is intended to provide general goals and a vision for the ultimate development of the City, while the Zoning ordinances enact specific regulations which have the force of law.

While existing zoning classifications C-2 (Special Commercial) and C-3 (Liberal Commercial) fit many of the needs of a TOD, they are incomplete because many uses common to Mixed Use districts are not permitted at all, while landscaping and FAR requirements prevent pedestrian-friendly densities from being achieved.

The Future Land Use Category of the NW 107th Avenue location was designated as a Metropolitan Urban Center by Policy 1.2 in the Sweetwater Comprehensive Plan when it was updated in 2014. Policy 1.3 is intended to compel future decisions and action, stating that "land development regulations shall be adopted which address the location and extent of... mixed use areas, in accordance with the Future Land Use Map..." At this point in time, however, no Metropolitan Urban Center zoning districts have been adopted in Sweetwater. A mixed-use district called the University City District exists in the Sweetwater Zoning Code, but it directly correlates with the "Mixed Use Residential / Commercial" Future Land Use category and contains provisions targeting the student body and their specific needs. Given that this Zoning district was created to fulfill the City's underlying Comprehensive Plan Land Use Category, it is reasonable to expect if the CSX East-West Corridor is implemented that a new transit oriented mixed-use zoning district could be created to fulfill the Metropolitan Urban Center land use designation around the NW 107th Avenue location.

This area (specifically, the area bounded by NW 14th St on the North, NW 107th Avenue on the East, NW 12th St on the South, and NW 111th Avenue on the West) has been identified in the Land Use Element of the Miami-Dade County Comprehensive Development Master Plan (CDMP) as a Regional Activity Center. This classification was created to encourage higher intensities of development by increasing the threshold of the development size required to undergo State review as a Development of Regional Impact (DRI). This does not designate the area as a Regional Urban Center or change the CDMP Land Use Plan map designation.

Unincorporated Miami-Dade County

In addition to Miami-Dade County's 34 municipalities, a significant portion of the County area remains unincorporated. At the time of the 2010 census, approximately half of the County's 2.5 million residents live in unincorporated parts of Miami-Dade County. These communities rely on the County to provide all governmental services such as policing, fire protection, and garbage collection.

In an effort to create a transit-supportive development framework that fulfills the goals, objectives, and policies of the CDMP Urban Centers text, the County has established Rapid Transit Zones. These Zones have special guidelines that govern the site design, building mass, permitted uses, parking, and circulation of development within their bounds.

Despite policy-level efforts to concentrate development in the developed eastern urban centers, unincorporated Miami-Dade has experienced rapid westward development in recent decades.

Unincorporated Miami-Dade County Land Use Policies

The Land Use Policies of Miami-Dade County apply to those unincorporated areas of the CSX East-West Corridor, and as such are more complex than in smaller municipalities.

The CDMP expresses the general objectives for where and how the County intends development to occur for the next 10-20 years. It provides goals which the specific ordinances of the County Zoning Code seek to fulfill. Specific sections of the CDMP that are applicable to the station area locations proposed for the CSX East-West Corridor include:

- The Dolphin Station location is currently designated in the CDMP with a Transportation land use on the southern end, and Restricted Industrial and Office uses throughout the rest of the area. The County Zoning designation is as Government Use, a default for areas not yet assigned a specific Zone. To function as a TOD, this station area would need to be re-zoned.
- The NW 137th Avenue Station location is currently designated in the CDMP as Industrial and Office land use, while the Zoning Code divides the site between multiple Industrial and Government Use zones. To function as a TOD, this station area would need to be re-zoned.

The CDMP seeks to promote urban centers in places where mass transit, roadways, and highways are highly accessible, so a special section of the County Zoning Code has been created with the intention to regulate current and future Urban Centers within the county. This section is known as the Standard Urban Centers District Regulations (SUCO). The conversion of the CSX rail line from freight to passenger service creates an entire corridor of new mass transit accessibility, and the identification of where and how new Urban Centers will form is critically important to the development process. Both the Dolphin and NW 137th Avenue Stations are viable candidates for selection as future Urban Centers.

Urban Centers are typically mixed-use districts, and are poorly served by traditional Euclidian function based zoning. To encourage the growth and development of these Urban Center Districts, the SUCO instead uses a form based code, a system which is shared by the City of Miami's Zoning Code named Miami 21.

Form Based Zoning Codes set requirements and restrictions on the size, shape and orientation of buildings, shifting the regulatory focus away from permitted uses. Allowing for a mix of uses provides the foundation for an urban center, and regulating the physical form of development coordinates growth towards a common high quality design.

Other Stakeholders

Other public agencies play active roles within the CSX East-West Corridor and will be important partners for successful TOD implementation. Rail service operations and land developers on the corridor should coordinate with Miami-Dade DTPW, which operates Miami-Dade Transit, the Miami-Dade Expressway Authority, which oversees operations on the Dolphin Expressway, the Florida Turnpike Enterprise, and FDOT. Other municipalities, including the City of Miami, Hialeah, and Miami Springs should be involved to synchronize tie-ins with existing trolley circulator systems and their future expansions.

Vacant Land near the 137th Avenue Site

Chapter 3
Defining the Opportunity

What is TOD?

The concept of TOD was developed by Peter Calthorpe in the 1990s. TOD is relatively high density, mixed-use development located within a short walk (within a five-to-ten minute walk) of transit stations. More specifically, it is pedestrian-oriented and compact development that contains a mix of residential, office, retail and other commercial uses. In the U.S., light rail, streetcar, and commuter rail has historically driven TOD in communities. Whether it is new construction, redevelopment, or small-scale infill development, a fundamental characteristic of TOD is that its physical form responds to – and is interrelated to – transit.

The success of TOD is dependent on the degree to which its land use composition, streetscape design, and urban form allow for strong connections between the community and the local transit asset. Figure 3.1 demonstrates how land use around transit stations should be structured to support vibrant TOD districts. Other key success factors include political support, the presence of supporting anchor institutions, locally adopted plans and policies, and developer interest and capability.

Downtown Dadeland is perhaps the most successful example of modern TOD in Miami-Dade County. Located on the southern end of the Metrorail corridor, Downtown Dadeland has undergone a dramatic transformation from a suburban commercial district into a vibrant downtown. The development within this area is generally mixed-use, offering a combination of retail, offices, and residential. Virtually all of it has been pedestrian-focused. Residential mid and high-rise towers have been built in the area, with direct rail access to Downtown Miami and other major job centers throughout the County. Figure 3.2 depicts an implemented TOD plan for Downtown Kendall, the area surrounding the Dadeland North and South Metrorail Stations.

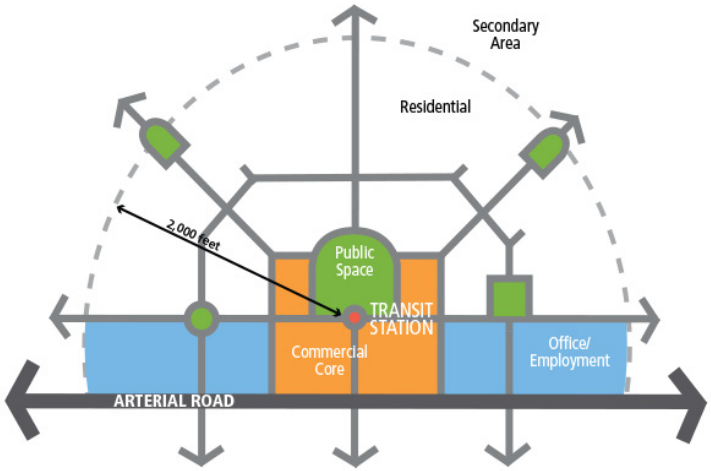


Figure 3.1 - Transit-Oriented Development
Source: Diagram based on Peter Calthorpe's illustration of TOD in *The Next American Metropolis, Ecology, Community, and the American Dream (1993)*

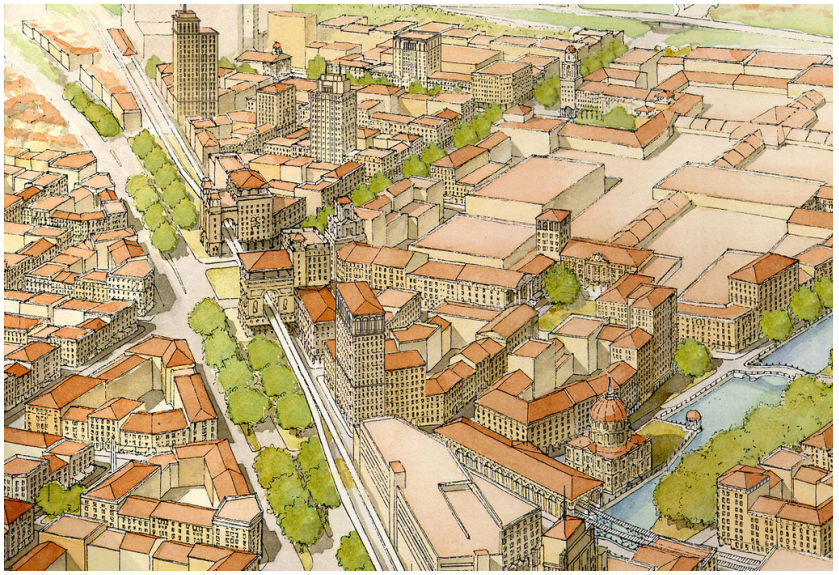


Figure 3.2 - Plan for Downtown Kendall, Miami, FL
Source: Dover-Kohl & Partners

TOD Potential

The CSX East-West Corridor has tremendous TOD potential. Despite the significant job and employment concentrations surrounding the corridor, there is relatively little transit coverage provided to this area. Land use patterns have hindered transit planning efforts to date, which is why the TOD model on this corridor is essential for the transit service's success. Conversely, for TOD to be sustainable in the long run, it must be connected by frequent, reliable, and efficient transit.

Screening Process

The station areas were preliminarily analyzed for TOD potential by assessing five (5) different measures within a half-mile of the station stop locations. The measures are as follows:

» Current Land Use – By integrating the most recently available Miami-Dade County Property Appraiser in to a Geographic Information System (GIS), this study was able to identify existing land use patterns. Land uses were generalized into the following categories - agricultural, commercial, government, industrial, institutional, miscellaneous (right of way, utilities), residential (low density, high density, and mixed-use), vacant, and waterbody.

» Demographics – Population and employment totals were measured for the station areas using US Census-designated Traffic Analysis Zones (TAZs). Densities by acre were subsequently calculated.

» Redevelopment Potential – Using recently available Miami-Dade County Property Appraiser data, the redevelopment potential of individual parcels within the study area were considered based upon annual estimates of building and land values. Using these figures, a Redevelopment Potential estimate was developed and represented as the ratio of a parcel's estimated building value to its estimated land value. Parcels with ratios falling within a range of 0 to 1.5 (meaning the building is no more than 1.5 times more valuable than the land it sits on) are considered to have a high redevelopment potential. Parcels with building to land value ratios of 1.51 to 3.0 are considered to have a medium redevelopment potential.

» Field Visits and aerial image review – Staff conducted two (2) field reviews of the proposed station locations and surrounding area as well as an evaluation of 2015 aerial images of the study area to identify opportunities and constraints for each.

7 Station Areas

Seven (7) station areas along the CSX East-West Corridor were evaluated for TOD potential as part of this study using the above-mentioned criteria. These stations were selected as a result of the MPO's CSX East-West Rail Feasibility Study based upon their ridership potential and proximity to regional connectors, regional attractors, and major employment centers. Four (4) of the station locations are recommended for TOD development, while the three (3) remaining station locations were evaluated because they serve major employment hubs, but at this time are not recommended for TOD development. Figure 3.4 depicts the station locations along the CSX East-West Corridor. Chapter 4 contains a complete analysis of each of the seven station areas.

Phase I - Starter Stations

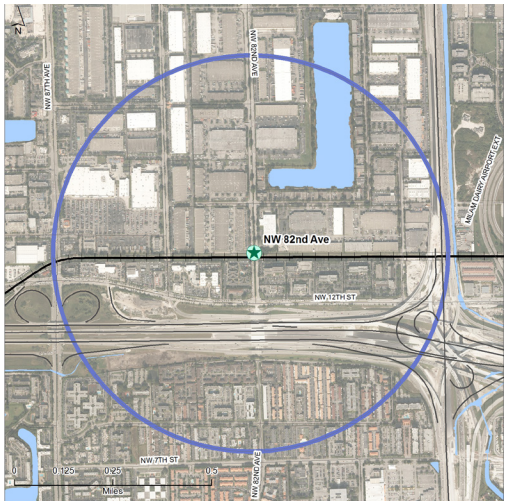
The MPO's previous Rail Feasibility Study identified four (4) station locations as candidates for a starter rail service. The four (4) stations – NW 82nd Avenue, NW 107th Avenue, Dolphin Station, and NW 137th Avenue have the highest ridership potential and, as this analysis demonstrates, possess the strongest opportunities to sustain TOD districts. Ridership in the Feasibility Study was modeled by alternative and was found to be the highest for the starter service station sites which are described this section.

NW 82nd Avenue

The 82nd Avenue Station is the best-equipped location to sustain TOD in the short term (five years). This station location offers a pedestrian-friendly environment, with a large, sun-shading tree canopy a landscaped median and sidewalks on both sides of 82nd Avenue. Although much of the surrounding area consists of warehouses, several have been adapted to retail uses, including restaurants, and a specialty food market across from the proposed station location.

Like the other stations on the corridor, residential parcels are limited to the south side of the Dolphin Expressway. Although NW 82nd Avenue does not currently connect to the neighborhoods on the other side of the expressway, the County is securing funding to construct an at-grade connection that would provide direct access to this community within the next 10 years.

A station at NW 82nd Avenue was chosen over NW 87th Avenue due to the reconfiguration of the Miami-Dade Expressway's Dolphin Expressway Ramps at NW 87th Avenue. The station site is close to the Doral Wal-Mart, located within a half-mile of the station site on NW 87nd Avenue. In 2014, this Wal-Mart was reported by local news stations to be the highest-grossing store in the United States. The store's location – in the County's geographic center and its close proximity to the airport are reasons cited for its success. A station at NW 82nd Avenue



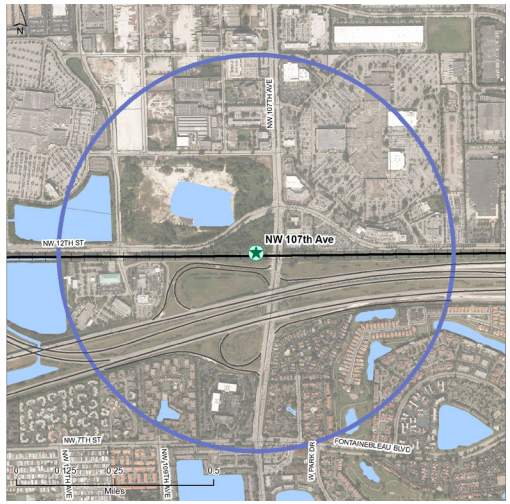
NW 82nd Avenue

The Feasibility Study notes that the NW 82nd Avenue station site houses intense industrial and warehousing uses and offers opportunities for walking and bicycling access to the station site.

NW 107th Avenue

NW 107th Avenue presents significant TOD development opportunities. Its proximity to two (2) significant regional attractors – Dolphin Mall and International Mall, combined with over 40 acres of vacant land adjacent to the proposed station location and immediately to its northwest are indicative of a location that has both a short and long term development potential.

Despite the challenges facing this station area, for instance, the existing urban form is currently auto-oriented, consisting of strip malls, and wide intersections (the north-south approach of the NW 107th Avenue and NW 12th Street intersection is 10 lanes wide), the station stop makes TOD at this location viable. It is situated less than 1.5 miles from FIU's Engineering and Modesto A. Maidique campuses, within the walkshed of two (2) shopping malls, and is just two (2) miles south of Doral's largest residential neighborhoods.



NW 107th Avenue

The Feasibility Study notes that NW 107th Avenue is most likely a destination station that could be served by DTPW buses and shuttles from the malls and FIU.

Dolphin Station

Dolphin Station is proposed on a currently vacant parcel of land at the northwest corner of the intersection between the Florida Turnpike (HEFT) and the Dolphin Expressway. Despite potential access restrictions from interchange ramps, the close proximity to two (2) major highways should prove to be an asset – station accessibility for commuters coming from the north and south is facilitated by the close proximity of these roads and Turnpike ramps. DTPW is scheduled to complete a multimodal transit terminal and park-and-ride station at this location by the end of 2017 to provide express bus service to Downtown Miami.

Beacon Lakes, a Development of Regional Impact (DRI) immediately to the north, is planning large-scale commercial office parks that will increase transit demand at this location. With close coordination between the station's stakeholders, a vibrant TOD district could emerge at the Dolphin Station location.

A combination of the station areas proximity to other major transportation infrastructure and the fact that the location is undeveloped translates to high development potential for the Dolphin Station within this rail corridor. However, the station site is located next to environmentally sensitive lands. The parcels are part of FDOT's right of way, and are part of a water drainage and wetland system. Steps need to be taken now to ensure that development at the station location is environmentally sensitive. Likewise, ensuring a transit-oriented focus will concentrate the land use on a smaller footprint, balancing the environmental and mobility demands that can make a successful multimodal station.

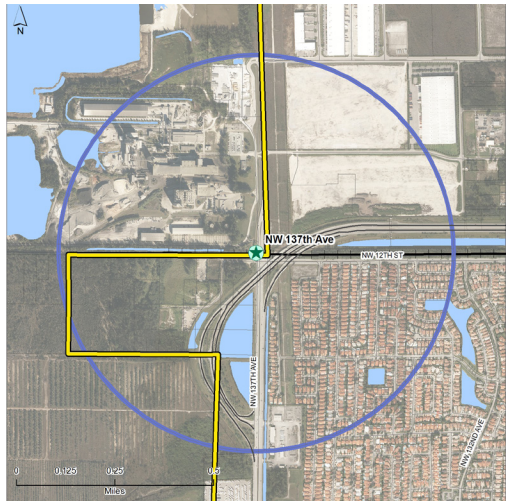
The Feasibility Study notes that Dolphin Station can serve as a park-and-ride station for local residents, but will primarily attract commuters coming from the Florida Turnpike.

NW 137th Avenue

Unlike the stations discussed up to this point, there are limited TOD opportunities at NW 137th Avenue. Despite this fact, the station is slated for service implementation in Phase I as a principal park and ride facility to serve the west Dade areas.

The proposed station location is just to the south of the Miami-Dade County Urban Development Boundary (UDB), adjacent to a cement mixing plant which could inhibit TOD-friendly uses. A built out single-family residential neighborhood has located southeast

Dolphin Station



NW 137th Avenue

of the proposed station location, with no short-term potential for densification. Finally, the developable land south of the station location has other potential conflicts – the Miami-Dade Water and Sewer Department (WASD) is planning a treatment plant in the area adjacent to the station location and MDX has proposed to build a south extension to the Dolphin Expressway through this location.

This station has limited ridership potential, given the above mentioned restrictions and low employment and residential densities. Given these restrictions and limited ridership potential, the station's primary use is as a route terminal. There is sufficient room for tail tracks for purposes of rail car storage and a light maintenance facility. Moreover, the land that is available can be used for park-and-ride services and a multimodal transit terminal for commuters originating trips from southwestern Miami-Dade County.

The Feasibility Study notes that NW 137th Avenue will be primarily a park-and-ride station serving local neighborhoods. Automobile access is assumed to be primary means of reaching the station site.

Phase II - Secondary Station Location Areas

NW 57th Avenue

NW 57th Avenue Station possesses tremendous potential as a station area. The location has the greatest employment density on the corridor thanks to the significant commercial parks located within a half-mile of the station. The commercial park buildings are some of the tallest structures in the area, some of which are approximately ten floors. However, the urban typology of these office parks is suburban, designed with automobile access as the primary transportation mode - many are surrounded by large surface parking lots – and are spaced so that walking to the Rail Corridor station is largely infeasible.

Other accessibility issues further limit the opportunity to develop a TOD district near the NW 57th Avenue station, primarily as a result of physical constraints. The station is situated between the south runway at MIA and the Dolphin Expressway. The Blue Lagoon and other large retention waterbodies further limit station accessibility. Finally, there is little housing near the station area. Most travel patterns will be oriented around standard business operating hours.

Thus, while NW 57th Avenue Station's proximity to the Blue Lagoon office parks makes it a viable commuter station, the land use patterns and development limitations imposed by physical barriers immediately adjacent to the stationlocation are factors that make TOD at this location infeasible. In addition MDX design of the Diverging Diamond Interchange may pose further constraints.

NW 72nd Avenue

The proposed station at NW 72nd Avenue would be located adjacent to the west end of the south MIA runway. As with the NW 57th Avenue station, the proximity to MIA's runway presents a problem for the viable development of a TOD. While stations further to the west are sufficiently removed from airport's glide path to make mid to high rise development viable, NW 72nd Avenue's adjacency to the runway restricts building height to one or two stories of development..

Although it is located only a half-mile from the NW 82nd Avenue station, NW 72nd Avenue presents starkly different prospects. Where NW 82nd Avenue is a tree-lined pedestrian friendly thoroughfare, NW 72nd Avenue is not – instead, it is a six lane divided arterial with high-speed traffic and limited to nonexsiting pedestrian connections. Where NW 82nd Avenue contains a mix of land uses and has significant density, the NW 72nd Avenue station location is surrounded by vacant land which is primarily airport right-of-way.

Overall, a station location at NW 72nd Avenue presents more challenges than opportunities for TOD development. A station stop at this location is not recommended in the initial phasing. Moreover, its proximity to NW 82nd Avenue suggests that further evaluation is necessary to determine if a station at NW 72nd Avenue is necessary at all.

NW 97th Avenue

This station area is has a similar land mix to NW 82nd Avenue with a few key differences. NW 97th Avenue has an above-grade connection over the Dolphin Expressway. At the proposed station location, 97th Avenue is approximately 60 feet above grade. This distinction means that access to the station location is limited to approaches from NW 12th Avenue. MDX has proposed a layover stop for express bus service on the Dolphin Expressway at the site of an abandoned toll plaza just to the west of the station. Access from the toll plaza over the expressway to the 97th Avenue station would have to be built.

Commercial land north of the station primarily consists of large lot car dealerships. The dealership properties are dominated by large surface parking lots that are used for vehicle storage, which results in little employment relative to the size of the parcels. Other commercial property northeast or near the station location has its accessibility limited by a large retention pond.

The lack of active, pedestrian-oriented uses, and barriers that limit access to the station location suggest that it is not primed for TOD at this time. The station should be considered for infill service in a second phase implementation.

Chapter 4
Station Area Profiles

This study began with a land use, demographics, and redevelopment potential analysis of the proposed station locations along the CSX East-West Corridor. These station locations were based upon areas that were identified in the CSX East-West Rail Feasibility Study completed by the Miami-Dade Metropolitan Planning Organization (MPO). Using Geographic Information Systems (GIS) software and publically accessible Miami-Dade County Property Appraiser data, the station areas were analyzed to identify their existing conditions and evaluate future development potential.

This section provides an in-depth review of the product of this analysis. Seven (7) station locations were reviewed throughout the CSX East-West Corridor. Each location is presented in this Appendix in order, from east to west.

NW 82nd Avenue, NW 107th Avenue, Dolphin Station, and NW 137th Avenue are anticipated to be the stations that will comprise a "starter service," or Phase I when passenger rail service commences on the corridor. These stations were found to have the highest ridership potential and offered the best opportunities for TOD development. The MPO's 2016 Feasibility Study modeled transit ridership on the corridor using Simplified Trips on Project Software (STOPS), the FTA's sketch planning model to calculate ridership. Service to NW 137th Avenue with high frequency – that is, peak period service of 15 minutes and off-peak at 30 minutes was found to contain the highest weekday boardings average.

This appendix evaluated three (3) additional areas. These are located at the intersections with NW 57th Avenue, NW 72nd Avenue, and NW 97th Avenue. As discussed in Chapter 3, these areas are not strong candidates for supporting TOD, but were evaluated nonetheless for a potential expanded service – a Phase II.

The Land Use analysis performed used the latest available folio data provided by the Miami-Dade Property Appraiser and linking it to a georeferenced folio layer. Land use classifications were generalized to the following classifications: agricultural, commercial, government, industrial, institutional, miscellaneous (right of way, utilities), residential (low density, high density, and mixed-use), vacant, and waterbody. These land uses were clipped to half-mile buffers around station locations and summarized according to each station area.

The Demographic analysis was conducted using available Traffic Analysis Zone (TAZ) data from the Southeast Florida Regional Planning Model (SERPM) 7 model, which contains population and employment figures per TAZ. The SERPM 7 model was developed for the FDOT using 2010 Census data. By applying GIS software, TAZ layers were clipped to match the half-mile station areas for each of the station locations. Where a fraction of a TAZ fell within a station area, the same fraction of population and employment was apportioned to that station area. Population and employment densities were calculated by dividing the population of the TAZ or fraction thereof by the total number of acres within the TAZ or fraction thereof.

The Redevelopment Potential analysis was produced using available Miami-Dade County Property Appraiser data. For each folio, the Appraiser records annual estimates of building and land values. Using these figures, a Redevelopment Potential estimate was developed and represented as the ratio of a parcel's estimated building value to its estimated land value. When the ratio falls within a range of 0 to 1.5 (meaning the building is no more than 1.5 times more valuable than the land it sits on) the parcel is considered to have a high redevelopment potential. Building to land value ratios of 1.51 to 3.0 are considered to have a medium redevelopment potential.

NW 57th Avenue Station

This analysis evaluated the TOD potential of a transit station at the intersection of NW 57th Avenue (Red Road) and the proposed CSX East-West Corridor.

The proposed station location at NW 57th Avenue faces a significant accessibility constraint based upon the existing physical barriers that exist adjacent to the station location. The Miami International Airport (MIA) runways inhibit any access from the north, and the Blue Lagoon corporate office park and SR 836/ Dolphin Expressway limit access from the south. These constraints limit the land development potential at this location.

Despite the constraints, there is significant commercial office activity in the area, to the extent that the Red Road station has the highest employment density (employees per acre) of all analyzed station areas along the CSX East-West Corridor.

Figure A.1 - NW 57th Avenue Station Area

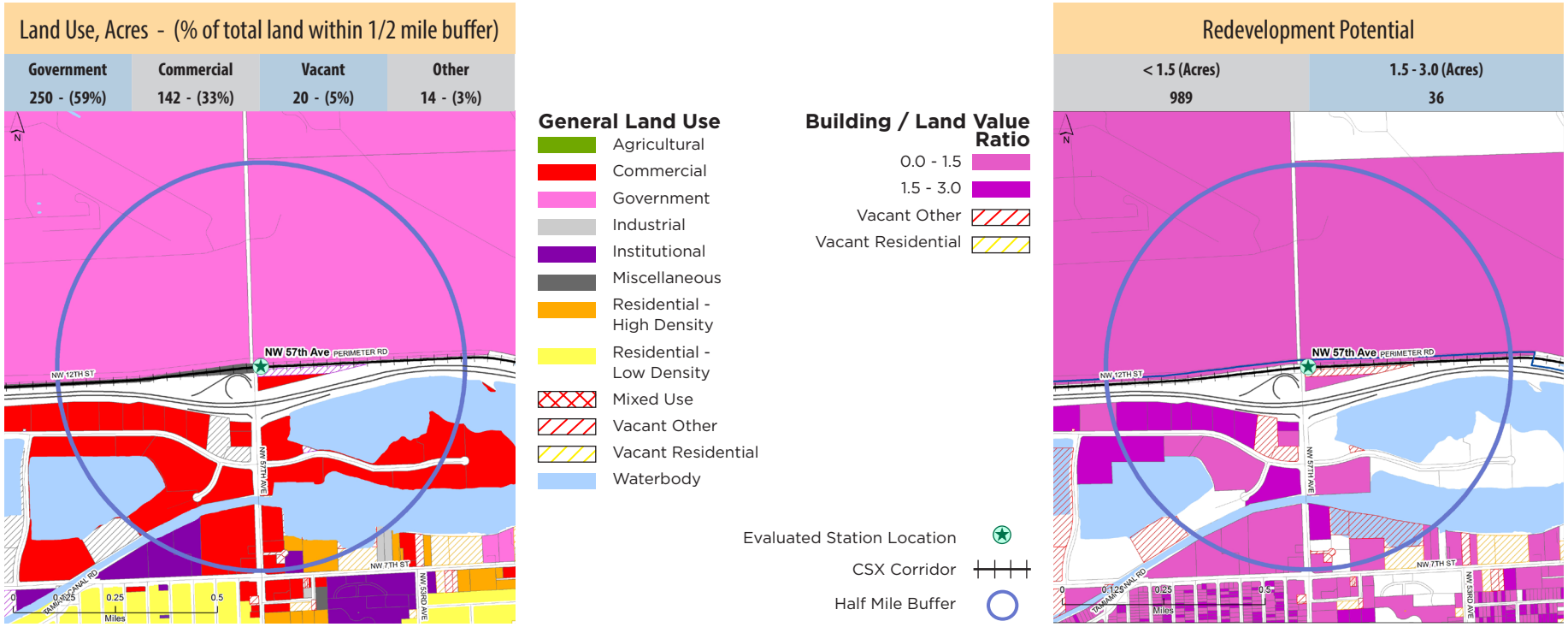


Figure A.2 - NW 57th Avenue Land Use

Figure A.3 - NW 57th Avenue Redevelopment Potential

Area Profile

Some residential density exists in this station area in the form of medium-rise senior housing facilities lining NW 7th Street. However, most of the housing in this station area falls outside of the half mile-radius and has limited access to the station location given the physical constraints as previously described.

Overall, the redevelopment opportunities near NW 57th Street are limited. The Blue Lagoon corporate office parks are a productive trip attractor and in the near term are unlikely to be redesigned into include residential or other mixed land uses that comprise a TOD forms which could cater to the proposed rail corridor. In addition, there are few vacant parcels that remain to create and serve as an anchor to spur further TOD development.

In summary, the NW 57th Avenue station area offers limited options for TOD implementation in its current form. Accessibility issues impede multimodal access to the proposed station location, and relatively limited redevelopment opportunities due to the amount of available land for development coupled with the challenges of accessibility due to physical constraints contribute to the challenges.

This analysis proposes a station platform with shuttle service linking the surrounding commercial and residential districts to this location. However, no TOD district at the stations location is proposed at this time.

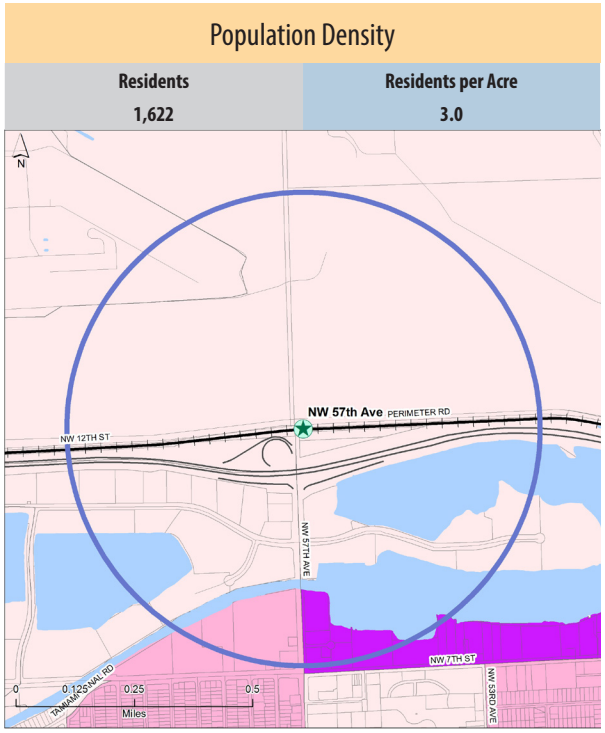


Figure A.4 - NW 57th Avenue Population Density

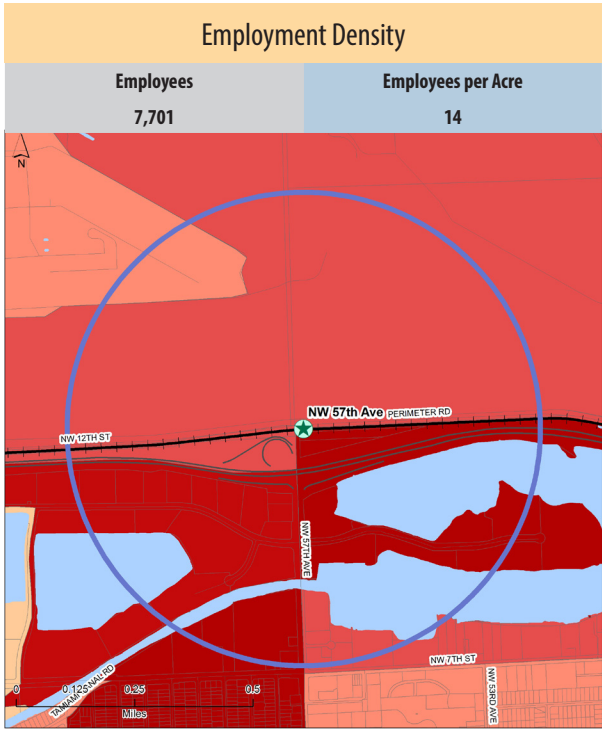


Figure A.5 - NW 57th Avenue Employment Density

NW 72nd Avenue Station

The NW 72nd Avenue station location faces similar challenges as the NW 57th Avenue station. Its close proximity to MIA's south runway and the Dolphin and Palmetto Expressway juncture places significant limits on access to the proposed station location.

Further hindering NW 72nd Avenue's potential is its close proximity to the proposed NW 82nd Avenue station. These station locations are physical separated by the Palmetto Expressway by approximately one-half mile. Intuitively, a passenger rail service on the corridor would choose one location or the other given the station spacing of these two proposed locations being so close. Based on the analysis in this study, the NW 82nd Avenue station location is the preferred location given potential TOD opportunities.

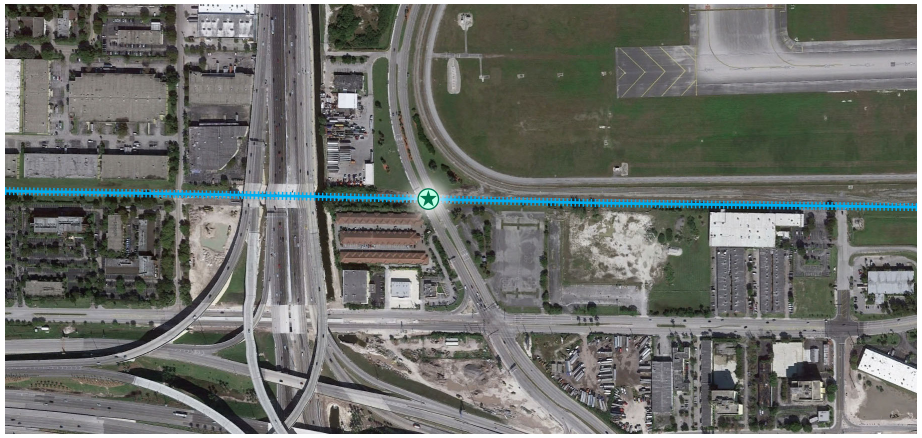


Figure A.6 - NW 72nd Avenue Station Area

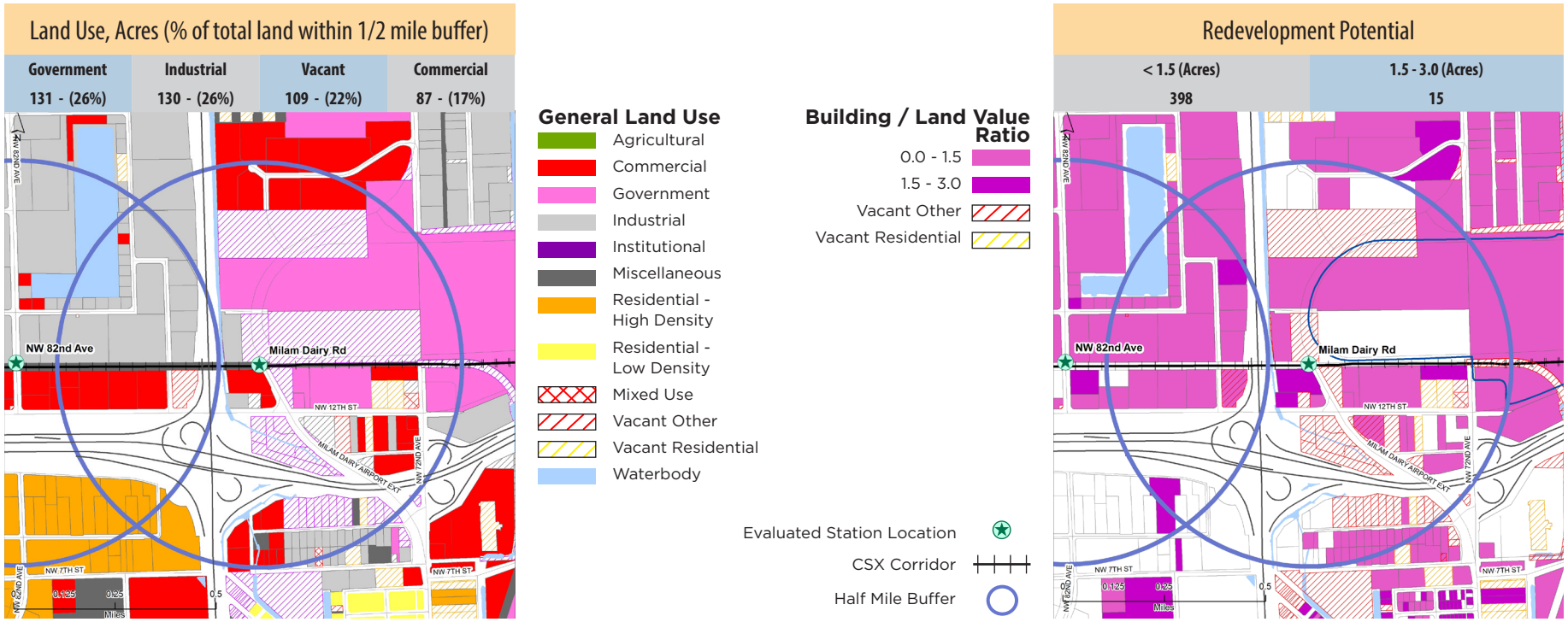


Figure A.7 - NW 72nd Avenue Land Use

Figure A.8 - NW 72nd Avenue Redevelopment Potential

Area Profile

NW 72nd Avenue's land use consists predominantly of commercial and governmental uses. On the commercial side, a large corporate office park is situated to the north of the proposed station location. Government land use is dominated by the airport. There are also significant amounts of vacant land within the half mile buffer, however, most of this is likely to remain vacant to preserve runway glide path and height restrictions as imposed by the Federal Aviation Administration at MIA.

Employment density is significant in this station area – only NW 57th Avenue has more employees per acre within a half-mile along the CSX East-West Corridor. By contrast, residential density is very limited with virtually no access to the station location. The only residential concentration within the station's vicinity is located to the southwest, across both expressways.

Despite the presence of underdeveloped land within the station area, the redevelopment opportunities at NW 72nd Avenue are limited. Vacant parcels exist near the proposed station location, however, they will likely remain so to preserve the airport's runway approaches. A warehouse district south of the station could sustain higher more intensive land use, but the impact on the station area would be limited due to the fact that the district is south of the Dolphin Expressway.

In sum, the NW 72nd Avenue station is feasible only as a substitute for the NW 82nd Avenue station. The height restrictions due to the area's proximity to the airport severely restrict TOD potential here. By contrast, NW 82nd Avenue overcomes some of the disadvantages posed here. If a rail station is eventually built at NW 72nd Avenue, out of necessity it would have to be a simple station with little more than a passenger platform and accessible shuttle service similar to the proposed recommendation for the 57th Avenue station.

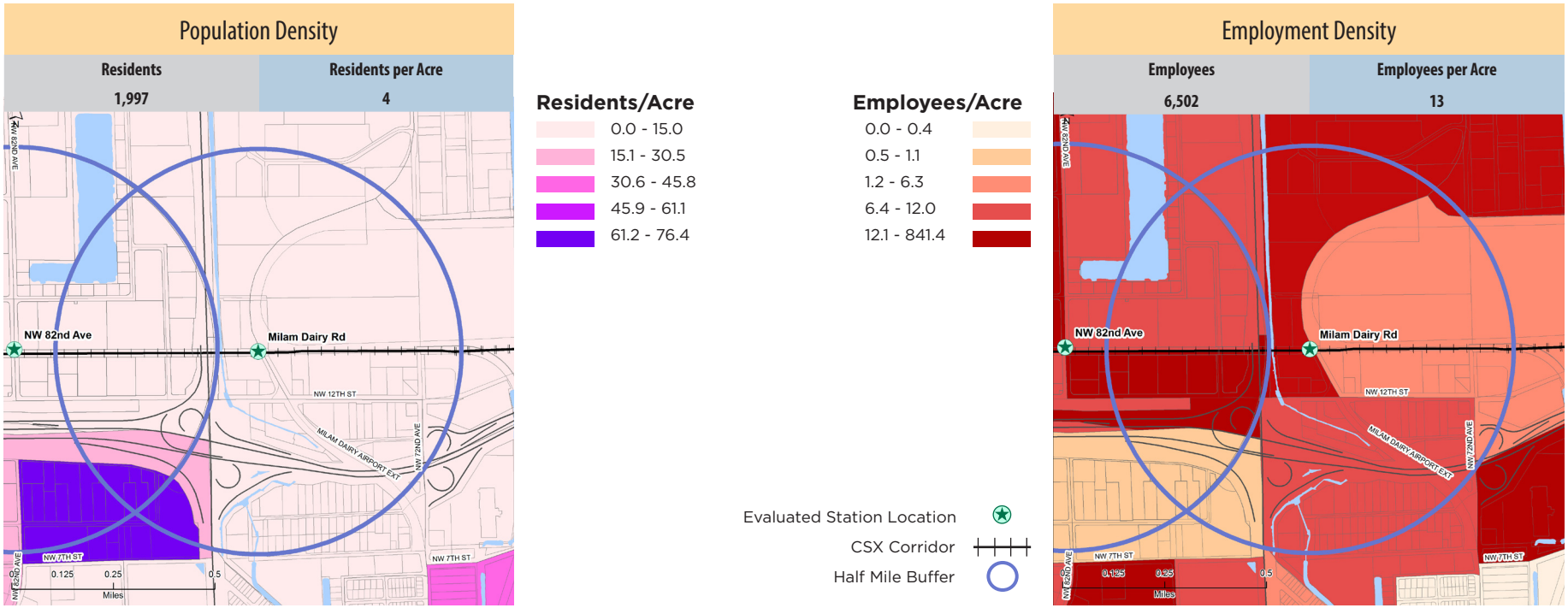


Figure A.9 - NW 72nd Avenue Population Density

Figure A.10 - NW 72nd Avenue Employment Density

NW 82nd Avenue Station

NW 82nd Avenue is a highly developed station area. In the preliminary operation plan, this station will be the easternmost Phase I station within the CSX East-West Corridor. Significant commercial and industrial activity is present in the station area which will help to foster incipient TOD at this location.

As is the case with most proposed station locations west of NW 82nd Avenue, land use types are segregated – industrial and commercial uses are predominant north of the Dolphin Expressway while high density residential is more prevalent south of the highway.

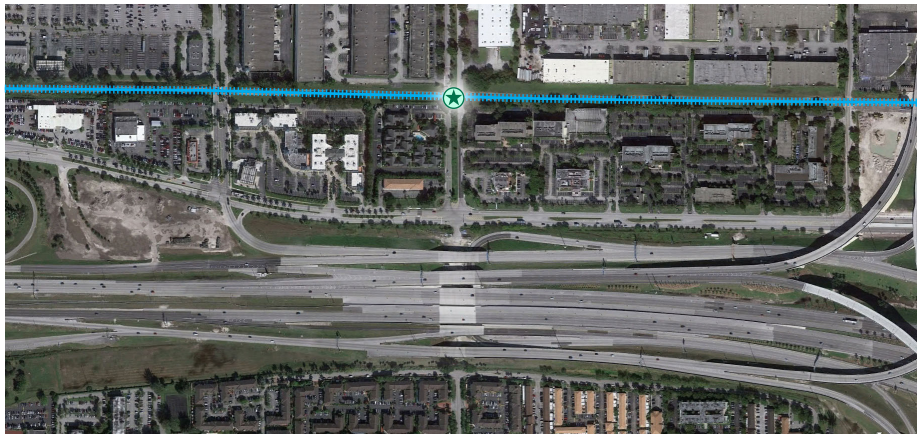


Figure A.11 - NW 82nd Avenue Station Area

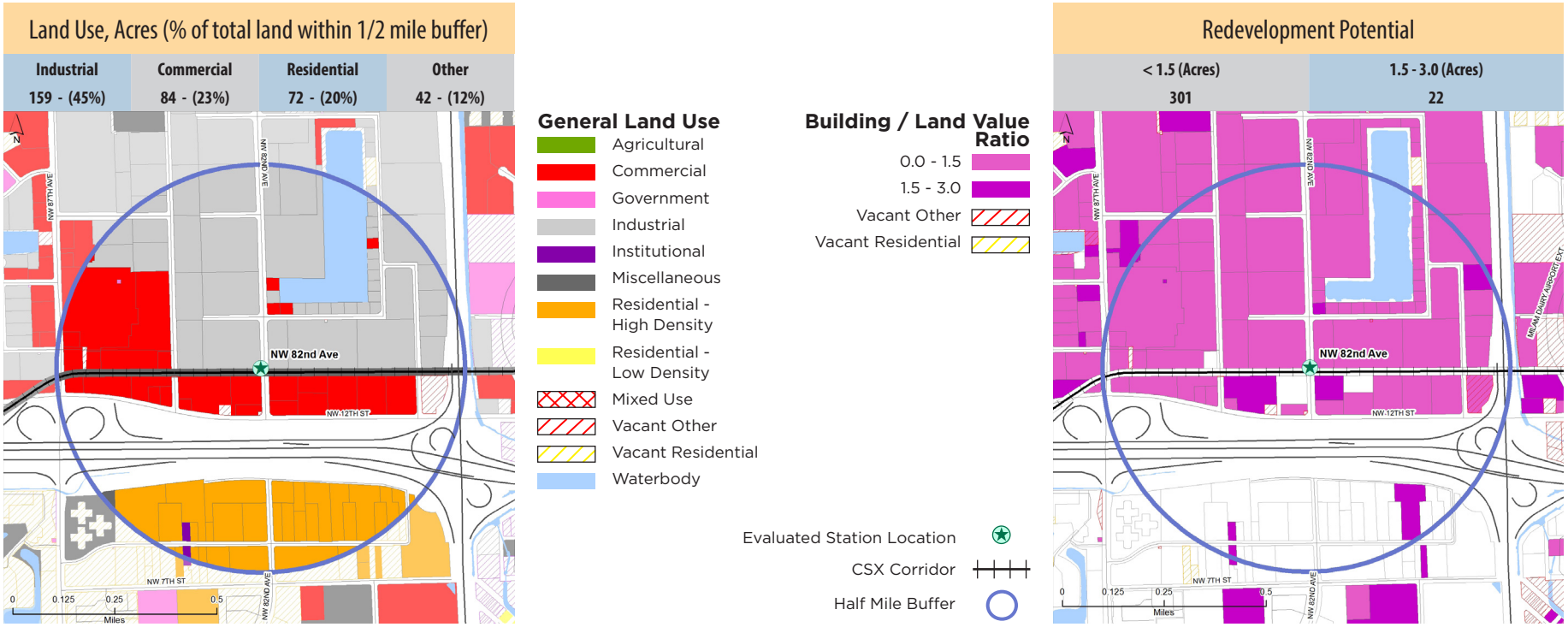


Figure A.12 - NW 82nd Avenue Land Use

Figure A.13 - NW 82nd Avenue Redevelopment Potential

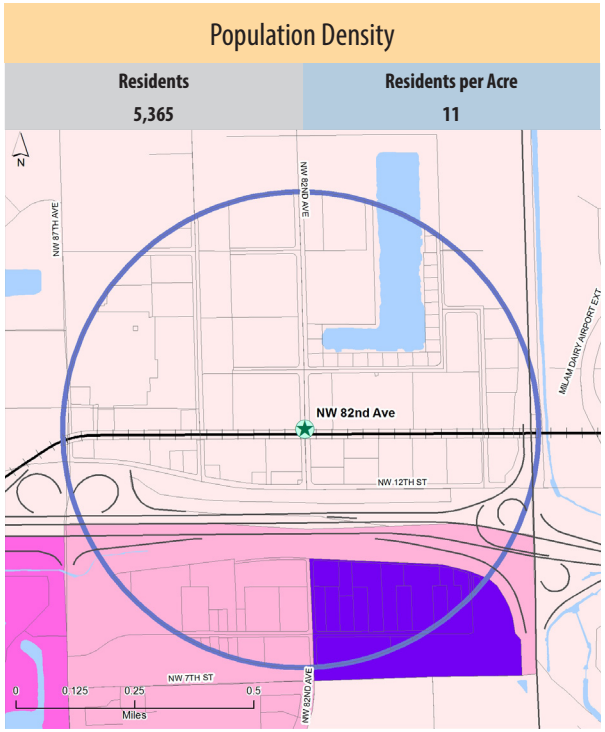
Area Profile

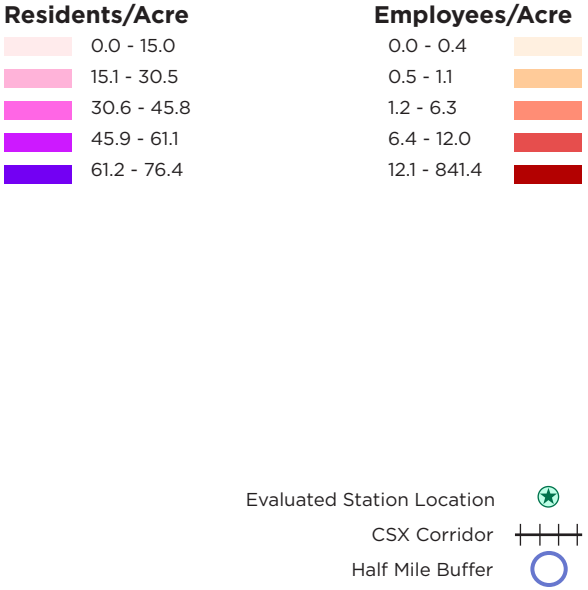
At the moment, NW 82nd Avenue does not extend underneath the expressway. Funding to connect the road is in the LRTP for 2020. When built, this connection will be essential to provide residents with direct multimodal access to the station platform. It is recommended that Miami-Dade County include sufficient right of way in the apron to space for a dedicated bicycle lane and a wide sidewalk (minimum 10-feet) within the right-of-way.

In its current form, NW 82nd Avenue provides a pleasant pedestrian environment. The roadway is a four lane divided facility with a wide median. Tree-lined sidewalks exist on both sides of the road to provide accessibility to adjacent development along the Avenue.

A significant share of the parcels near the station location were flagged as being ready for redevelopment. This includes most of the warehouse district to the north of the rail corridor. This is most likely a reflection of the analysis itself. Warehouses are relatively cheap structures and therefore are more likely to be flagged by the redevelopment analysis. Field observations of the station area showed no indication that these structures were underutilized. Furthermore, there are few vacant parcels near NW 82nd Avenue, suggesting a productive and active district.

The TOD vision for NW 82nd Avenue proposes an intensification of development on land fronting NW 82nd Avenue while preserving the industrial and commercial character of the surrounding community. Based upon initial coordination with the City of Doral, staff stressed the financial importance of this neighborhood to the economic strength of the City.





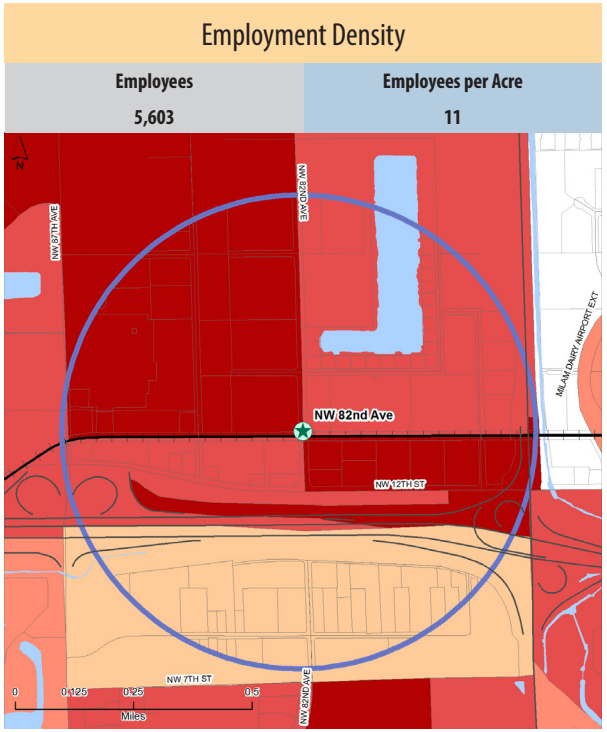


Figure A.14 - NW 82nd Avenue Population Density

Figure A.15 - NW 82nd Avenue Employment Density

NW 97th Avenue Station

NW 97th Avenue has a similar land use distribution to the NW 82nd Avenue Station. Commercial and industrial land uses dominate the north side of the Dolphin Expressway, while high density residential is dominant on the south side.

Employment density in the station area is relatively low – its employment density is the third lowest of the assessed areas along the CSX East-West Corridor. This is in part due to a substantial portion of commercial land use designated for car dealerships with significant acreage dedicated to surface parking.

NW 97th Avenue is grade separated at the proposed station location and crosses over the Dolphin Expressway. This feature complicates access to the station which could be mitigated by providing constructing a direct link from the overpass to the

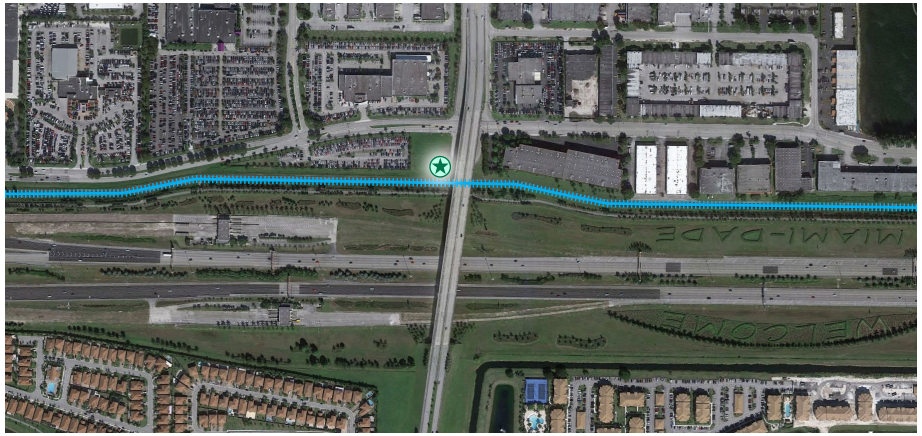


Figure A.16 - NW 97th Avenue Station Area

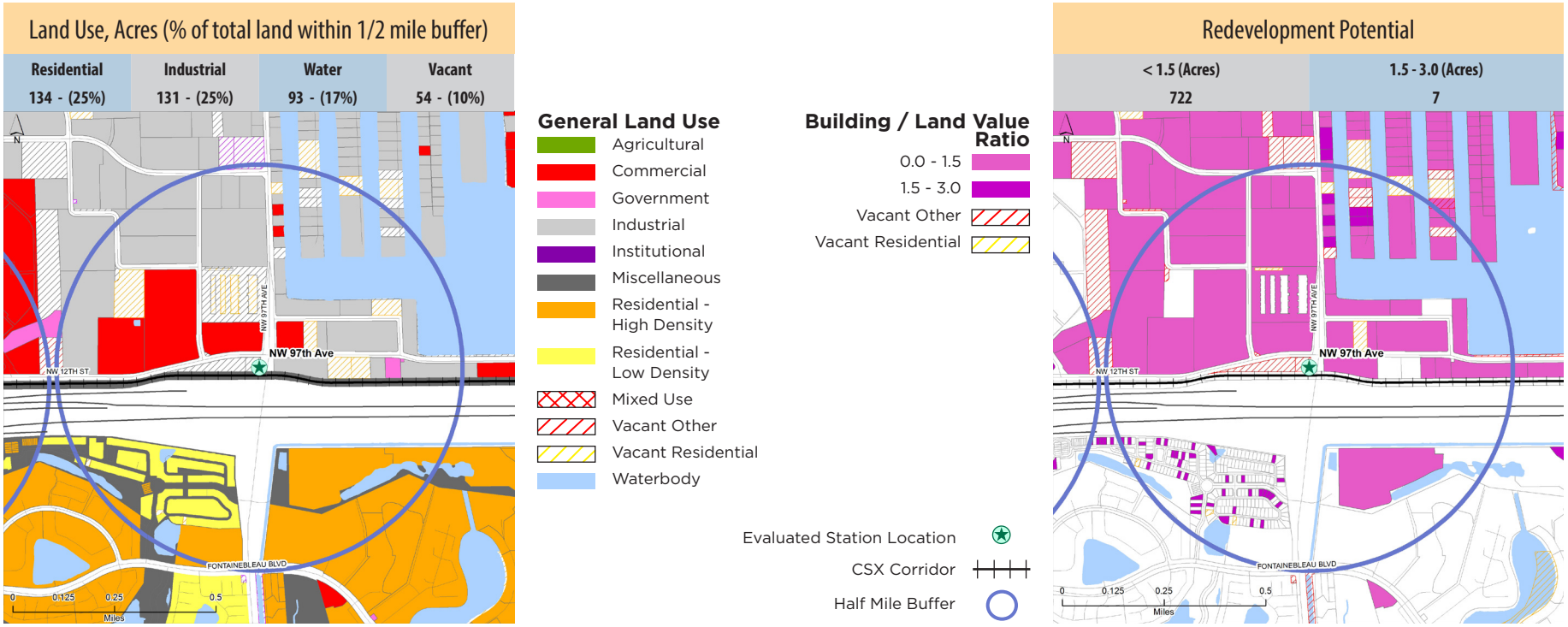


Figure A.17 - NW 97th Avenue Land Use

Figure A.18 - NW 97th Avenue Redevelopment Potential

station itself, to facilitate pedestrian access. Without this link, pedestrians would have to walk approximately 1/3 of a mile and have to cross at least two (2) streets.

A large retention pond in the northeast quadrant further complicates access to this location. A large warehouse district is located here, but is separated from the station location because the businesses are located on peninsulas reaching in to the retention pond. In a straight line, these warehouses are as close as 1/3 of a mile, but rail passengers would have to travel six times that distance to access the station on existing right of way.

The car dealerships in this station area were flagged by the building to land value analysis as being potential redevelopment sites. They were identified likely because the dealership buildings have a comparatively low value relative to the large sites they occupy. Although there is little vacant land within the evaluation area, there is one notable exception. The parcel adjacent to the proposed station location is vacant. It is currently used as vehicle storage by a dealership. A station at this location could easily convert this site in to a park-and-ride with little effort.

NW 97th Avenue has the potential to serve as a multimodal transfer station. Due to the location of an abandoned toll plaza at this location, the Miami-Dade Expressway Authority (MDX) has proposed a layover station for Dolphin Expressway Express Bus services.

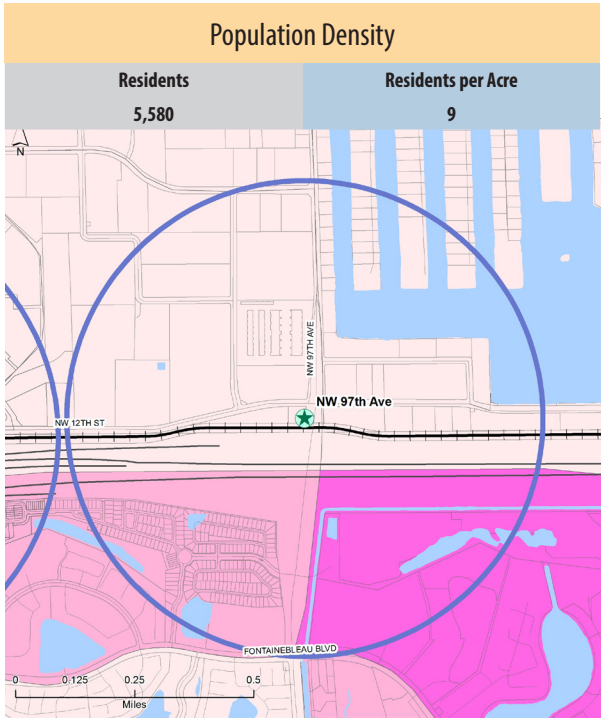
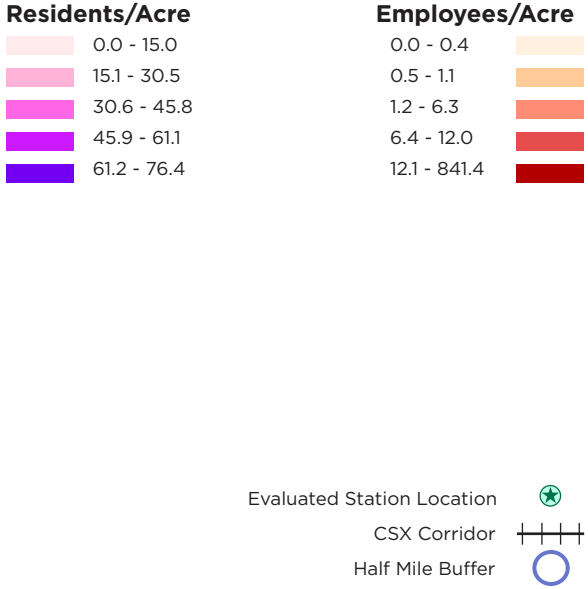


Figure A.19 - NW 97th Avenue Population Density



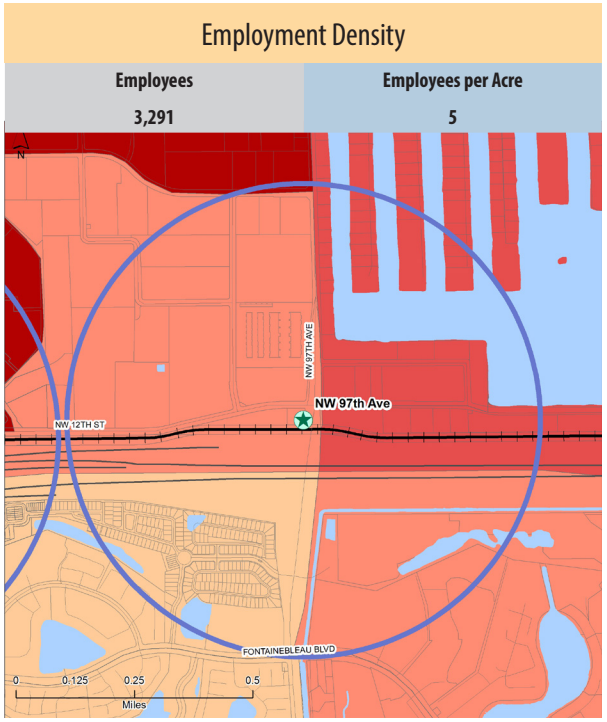


Figure A.20 - NW 97th Avenue Employment Density

NW 107th Avenue Station

Based upon the analysis in this study, NW 107th Avenue has the greatest TOD potential on the CSX East-West Corridor. The station location is adjacent to a large vacant parcel, which has been targeted for a large scale mixed-use development. NW 107th Avenue itself is a major north-south arterial (in 2015 Average Annual Daily Traffic was 71,000) that provides a critical link between the Cities of Doral and Sweetwater and Florida International University (FIU) and other significant concentrations of suburban residential neighborhoods further to the north and south.

Two major shopping malls are located within a half mile of the station location. Dolphin Mall and International Mall are major regional destinations. The former attracts international visitors to its outlet shops. The Dolphin Mall has a strong local draw as well thanks to a large entertainment district that hosts restaurants, a bowling alley, and two movie theaters.

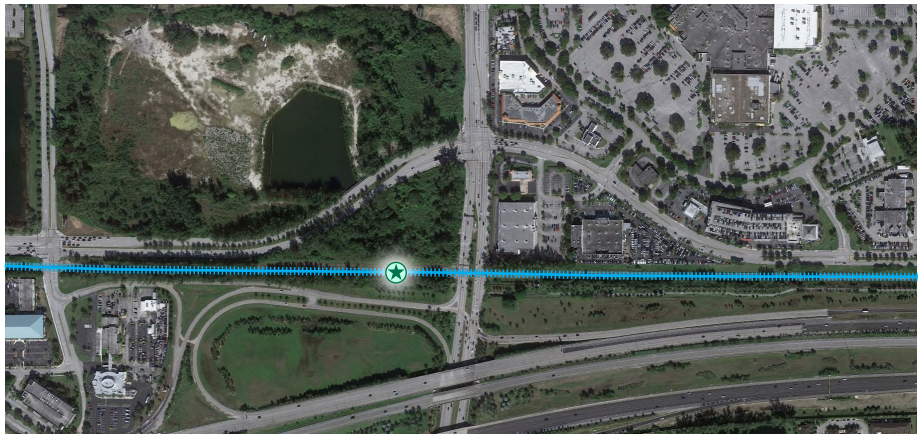


Figure A.21 - NW 107th Avenue Station Area

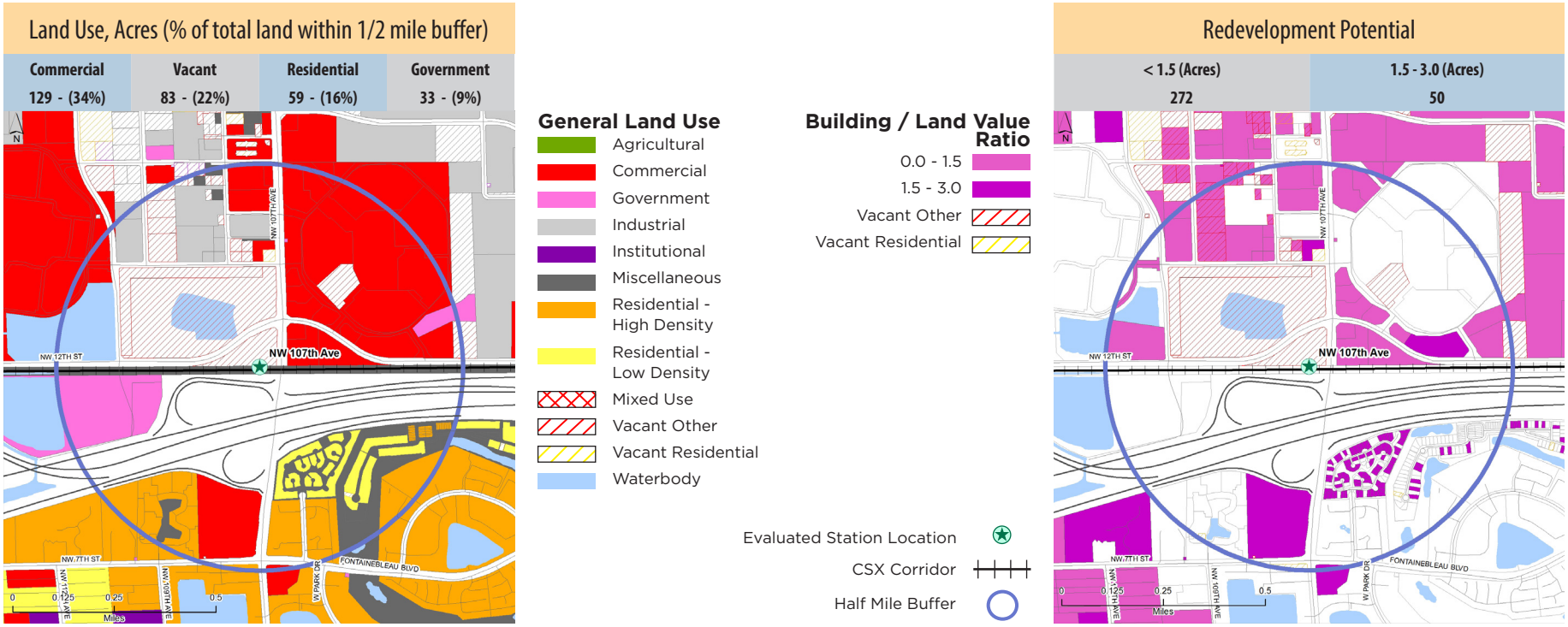


Figure A.22 - NW 107th Avenue Land Use

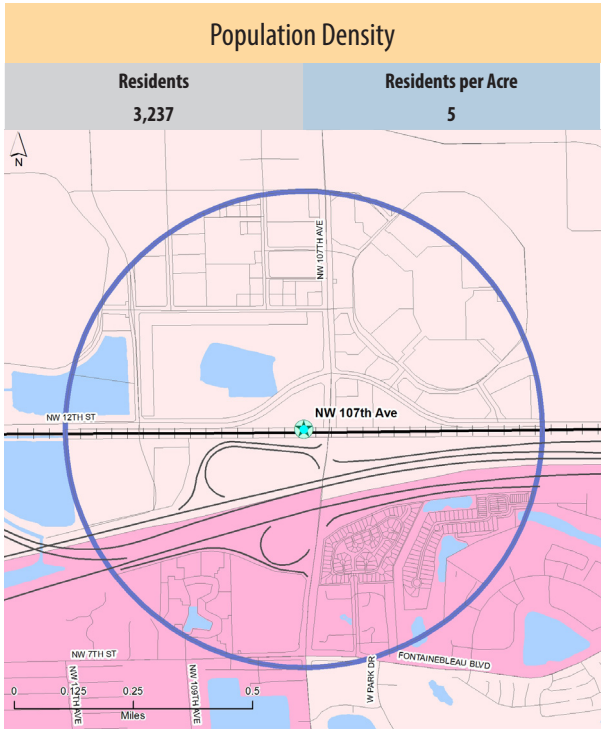
Figure A.23 - NW 107th Avenue Redevelopment Potential

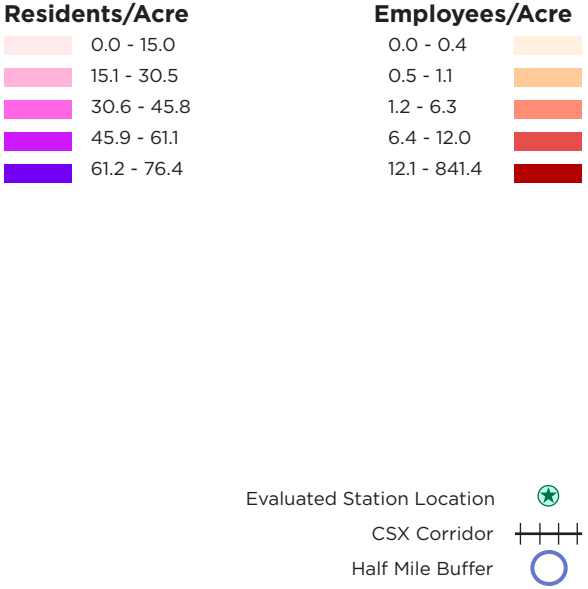
Area Profile

Ridership modeling for commuter rail service on the CSX East-West Corridor indicate that the NW 107th Avenue station will attract the most ridership. The concentration of jobs and retail within the area are strong drivers behind this anticipated demand.

The Redevelopment Potential analysis indicates there are significant opportunities at NW 107th Avenue. In addition to the large vacant parcel adjacent to the station location, a warehousing, and light industrial district north of NW 14th Street also has the potential to be transformed into a TOD district. Several strip mall structures contouring International Mall are also potential redevelopment sites.

Ultimately, NW 107th Avenue is envisioned as the signature station on the CSX East-West Corridor. The vacant land opportunities combined with the existing anchor shopping malls have the potential to make this station a significant pedestrian-friendly activity center to include a mix of land uses such retail, commercial, office and residential district.





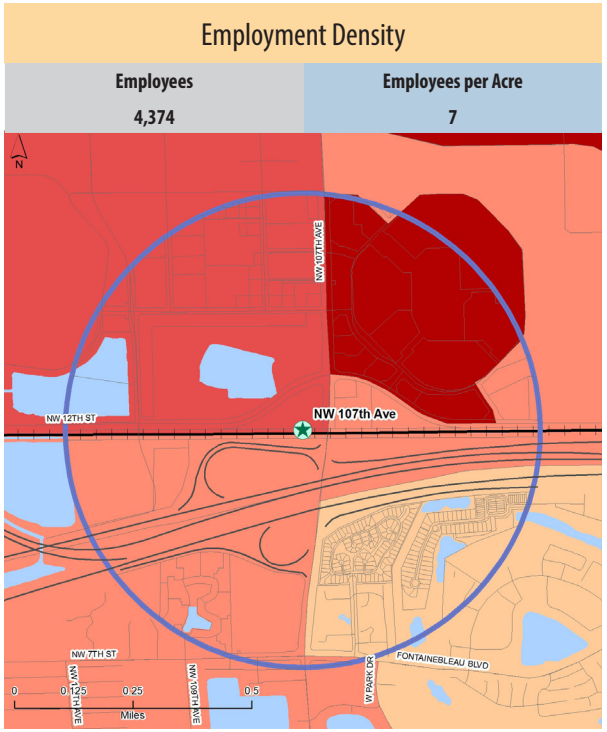


Figure A.24 - NW 107th Avenue Population Density

Figure A.25 - NW 107th Avenue Employment Density

Dolphin Station

Dolphin Station will be a Miami-Dade County DTPW park-and-ride transit center when it opens as planned for late 2017. The introduction of passenger rail service on the CSX East-West Corridor has the potential to transform the area from a transit hub in to a multi-modal TOD district.

Vacant land is dominant near Dolphin Station. Public agencies including MDX and FDOT hold land in anticipation of expanding highway facilities in the area. Additionally, Beacon Lakes, a Development of Regional Impact (DRI), has been steadily expanding its warehouse and commercial development efforts in the area.

Some residential development exists within the analysis area for Dolphin Station. Located in the southwest quadrant, the neighborhood consist of a mix of single and multi-family housing.

Figure A.26 - Dolphin Station Area

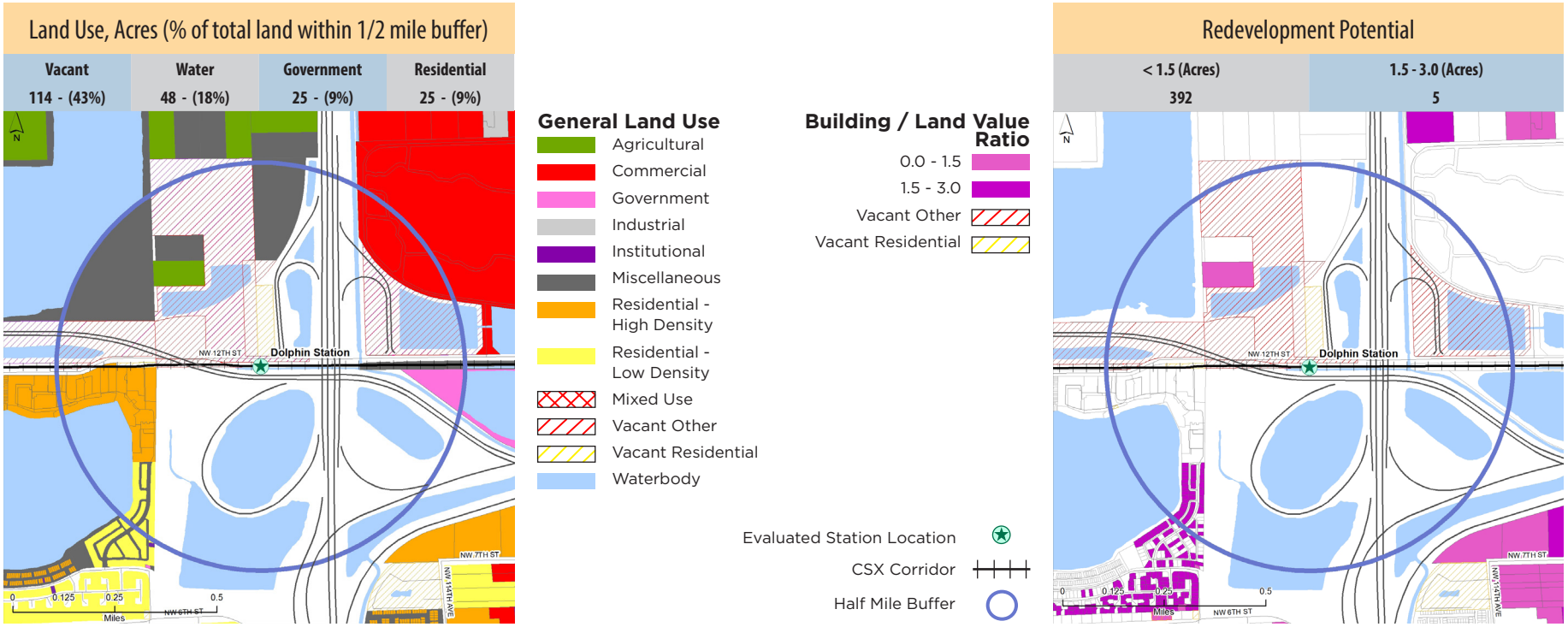


Figure A.27 - Dolphin Station Land Use

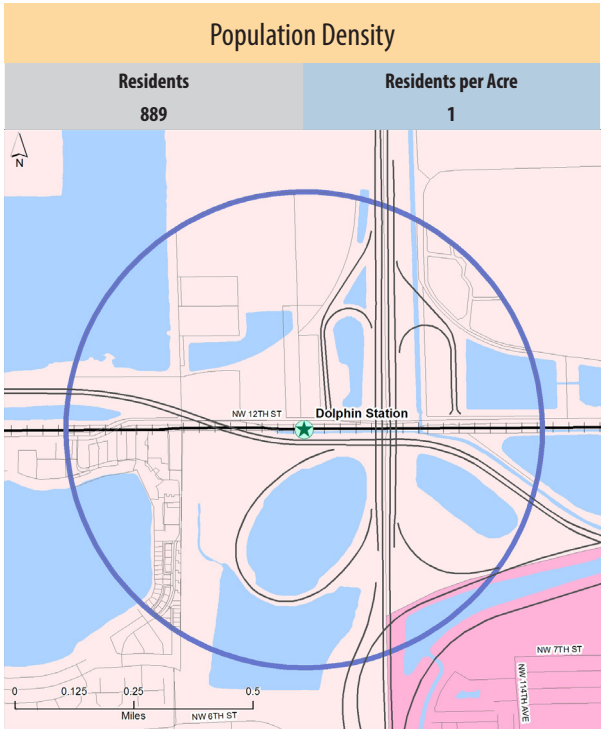
Figure A.28 - Dolphin Station Redevelopment Potential

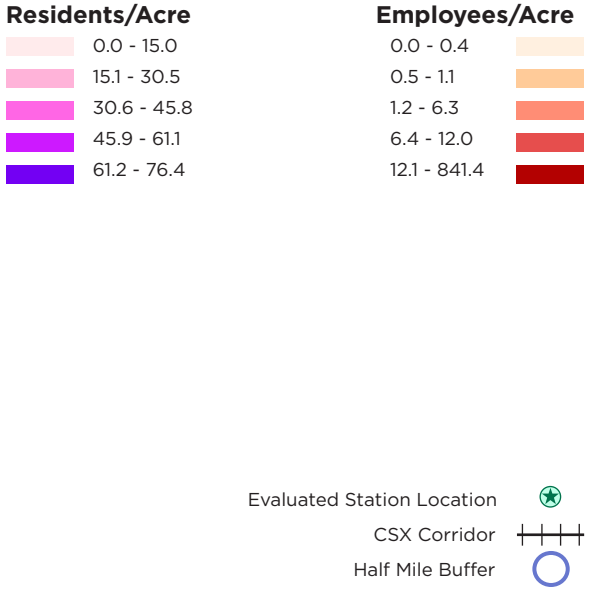
Area Profile

Overall, accessibility to the station location is a significant constraint that also presents an opportunity. Dolphin Station is located north of the Dolphin Expressway, and west of the Florida Turnpike; the current on and off ramp configuration between these two major highways limits pedestrian and cyclist access to the station location. However, the access to the highways also makes Dolphin Station a significant collection point for park-and-ride commuters.

Ongoing joint MDX – Florida Turnpike Enterprise (FTE) plans call for the construction of north to west and west to north ramps that can potentially bisect the station area. These ramps can potentially impede the construction of a sustainable TOD district. Moving forward, coordination with both agencies is essential to preserve TOD development opportunities at Dolphin Station.

Despite the challenges facing Dolphin Station, the station has significant opportunities that can help foster TOD growth. Considerations must be made for environmentally sensitive wetlands within the station half-mile radius, but otherwise, the undeveloped parcels adjacent to the station location present a significant opportunity here. Other factors that can contribute to the success of TOD here include upcoming planned development (Dolphin Station, Beacon Lakes DRI), and close proximity to major highways and Dolphin Mall are factors that, combined with passenger rail on the CSX East-West Corridor can help ensure the development of a successful TOD district.





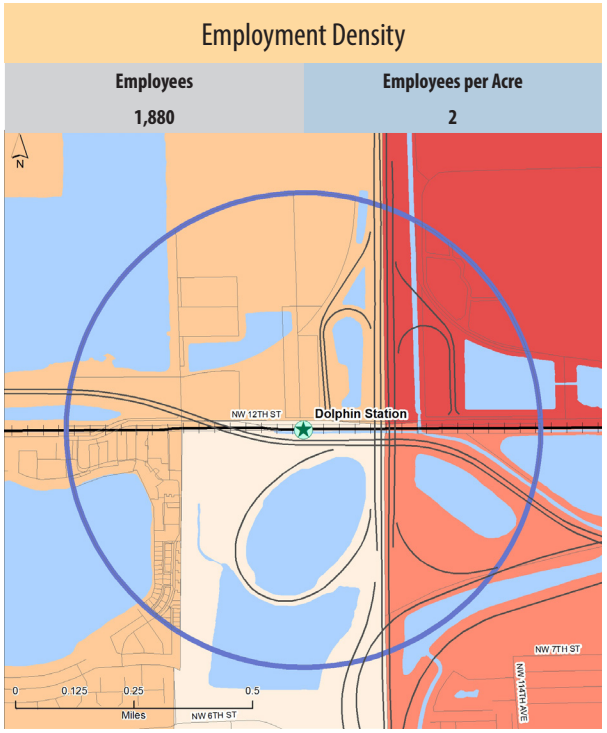


Figure A.29 - Dolphin Station Population Density

Figure A.30 - Dolphin Station Employment Density

NW 137th Avenue Station

NW 137th Avenue is envisioned as a terminus station on the CSX East-West Corridor. Its anticipated platform location will be adjacent to the Urban Development Boundary (UDB), which will severely restrict TOD opportunities. A fully built-out residential neighborhood in the southeast quadrant of the station area further restricts development opportunities at this station location.

Land Use at NW 137th Avenue is generally not diverse. It is comprised of a mix of industrial (northwest quadrant), single-family residential (southeast quadrant), vacant industrial (northeast quadrant) and agricultural (southwest quadrant). There is no high-density residential or commercial activity near the station area.

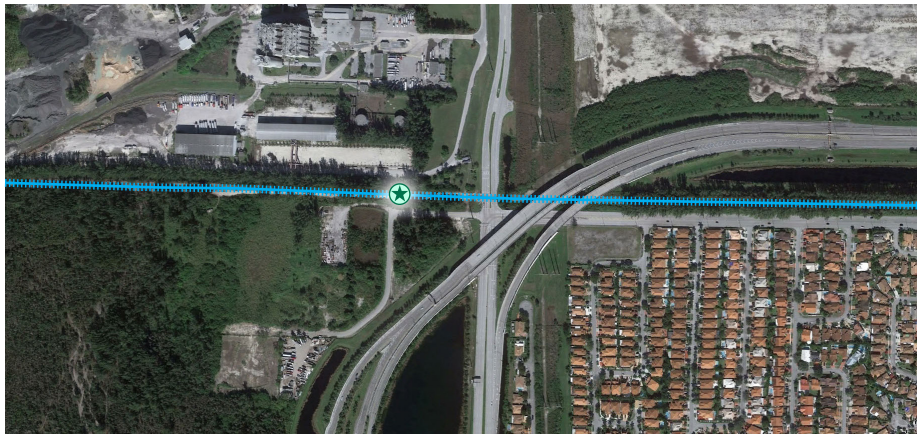


Figure A.31 - NW 137th Avenue Station Area

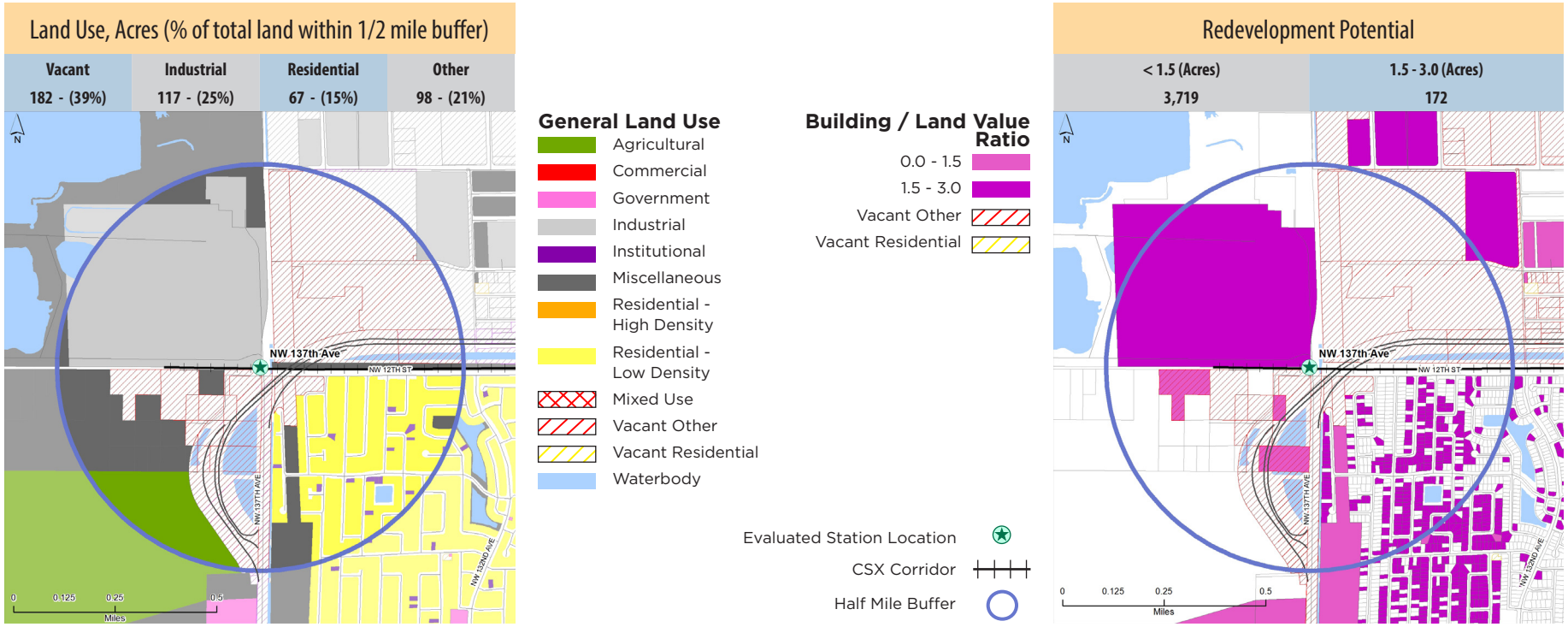


Figure A.32 - NW 137th Avenue Land Use

Figure A.33 - NW 137th Avenue Redevelopment Potential

Area Profile

The station's location at the intersection of NW 12th Street, NW 137th Avenue, and the terminus of the Dolphin Expressway and its adjacency to the UDB pose challenges for the development of TOD at this location.

Employment Density is the least concentrated of the evaluated station areas along the CSX East-West Corridor. Residential density is the second smallest, behind only Dolphin Station. These demographic attributes in combination with the existing land uses, and accessibility constraints present significant limits to TOD potential here. Furthermore, MDX has a planned expansion of the Dolphin Expressway which would be constructed through the mile station area buffer.

In light of these challenges, the study envisions a moderate-sized park-and-ride multimodal facility adjacent to the CSX East-West Corridor as a location to intercept trips that originate in the western communities of Miami-Dade County. Considering its terminal status and vacant land opportunities, the station can also act as a passenger train storage facility and light maintenance yard for rail operations.

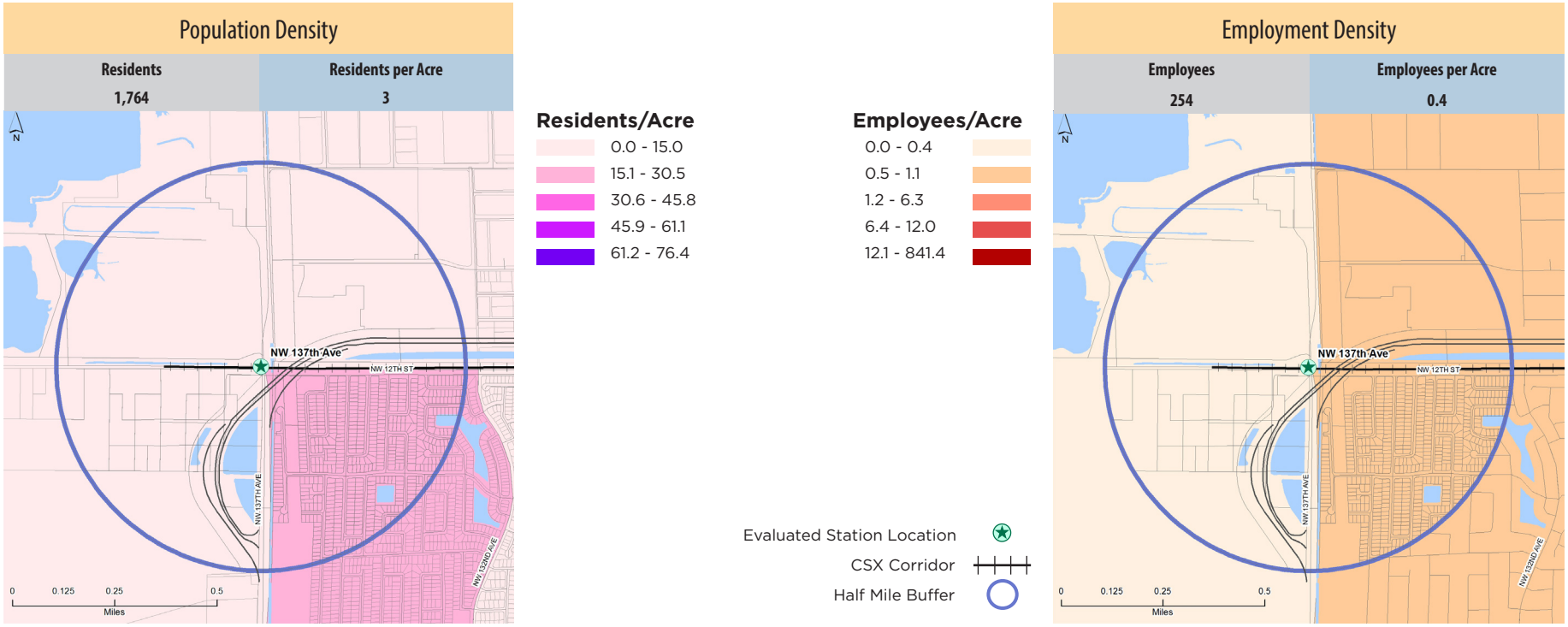


Figure A.34 - NW 137th Avenue Population Density

Figure A.35 - NW 137th Avenue Employment Density

Chapter 5
TOD Vision & Organizing Principles

The CSX East-West Corridor provides a tremendous local and regional economic development opportunity for Miami-Dade County, the City of Sweetwater, City of Doral, and beyond. To ensure the corridor's success in attracting development and repositioning this area for transformative growth, the corridor must operate as a transit-oriented system guided by a plan vetted by the community and its stakeholders. Each station serves as "pearls on the necklace," and should be connected to one another through a balanced series of motorized and non-motorized connections. For example, there is an opportunity to leverage existing community recreational assets, such as the Kitty Roedel Trail, to improve east-west and north-south interstation connections.

Seven Organizing Principles

The following seven (7) organizing principles are intended to guide the vision for TOD along the CSX East-West Corridor, and to inform land use planning, urban design and building form, and transportation enhancement recommendations. These principles are an important starting point in advancing TOD visioning and key concepts that will ultimately steer future growth in the selected station areas to maximize future rail and bus transit investment along the corridor.

1. Provide a balanced mix of transit-supportive uses and accommodate all modes of transportation.

2. Ensure that multi-modalism drives urban form.

3. Coordinate plans for future development and infrastructure.

4. Break down the rigidity of the grid, and strengthen the public realm and urban identity through the use of building frontage and active ground floor uses.

5. Promote value creation through integrating innovatively designed storm water management systems into new development.

6. Connect and respond to surrounding built and natural contexts.

7. Ensure development flexibility and logical phasing.

Corridor Vision

The CSX East-West Corridor seeks to transition an underutilized CSX freight rail line into a passenger rail line that can serve the adjacent community and region. In order to achieve this vision, the station areas along this new transit spine need to be transformed from auto-oriented neighborhoods to sustainable mixed-use communities with clear and physically discernible centers of vibrant civic activity. As the land use patterns on the corridor shift, it will attract and retain residents, recreation seekers, retail activity, major employers and anchor institutions, and retailers. These communities thrive on having easy and equitable access to more housing options, employment opportunities, shopping, and recreational amenities.

Establishing TOD districts along the CSX East-West Corridor will maximize the value created by the transit investment and stabilize Miami-Dade County's westward development trend by providing a channel for growth east of the Urban Development Boundary (UDB). In this plan, the growth will be tied together by a network of open spaces, parks, waterbodies, and trail systems – which collectively provide a robust non-motorized system of transportation. Key to the success of this corridor is strengthening and expanding the existing assemblage of land use and recreational assets currently in place.

After examining the half-mile radius from each of the four (4) selected proposed Phase I stations and analyzing physical capacity for TOD, four (4) distinct TOD character themes emerged. The following four (4) themes – listed in order of envisioned increased density gradation – are proposed for each of the four selected Phase I stations. Each of these TOD character themes are described in more detail later in this chapter.

TOD Themes

1. Stand Alone Station

2. Walkable Transit Spine

3. Coordinated Growth Area

4. Multimodal Transit District

Each of the TOD vision plans for the four (4) selected Phase I stations – as presented in this chapter - is unique, and intended to provide initial direction and guidance for future land use, urban design, and transportation planning decisions along the corridor.

The TOD vision plans shown on the following pages are organized by TOD character theme and presented from lowest to highest TOD density and envisioned physical transformation.

Each TOD vision plan is illustrated in this chapter and graphically conveys potential future transit facilities, building massing, supporting street and block structure, and complete streets improvements.

It is important to note that the vision plans represent one of many possible permutations for TOD, and are not actual development proposals. They are intended to provide a vision for the four (4) station areas and meant to begin and inform a dialogue among local stakeholders, private real estate developers, municipal leaders, and the community.

The following is a high-level overview of the key urban design and land use objectives based on the organizing principles previously discussed in this chapter and set up the framework for TOD at each of the proposed station areas, and depicted in more detail later in this chapter.

DENSITY

NW 137th Avenue Theme:

Stand Alone Station

- Integrate Complete Streets improvements to NW 12th Street to connect existing residential community to future rail terminal and ancillary facilities.
- Provide large park and ride facility that is well-connected to future bus berthing and rail platforms.
- Preserve potential for future public works facilities and transit-supportive development within the station area.
- Develop a multimodal transit facility that allows for future and unencumbered extension of the Dolphin Expressway.
- The station's link to other stations along the corridor is enhanced through its connection to the proposed extension of the Kitty Roedel Trail.

NW 82ND Avenue Station Theme:

Walkable Transit Spine

- Focus on NW 82nd Avenue frontage.
- Reorient buildings to face the street.
- Medium density mixed-use development with focus on active ground floor uses.
- Wrapped parking structures to put parking out of view.
- Mid-to-high rise development (5 – 8 stories – subject to MIA flight path height restrictions).
- Complete Streets and beautification improvements on NW 82nd Avenue to provide better north-south connections.
- The station's link to other stations along the corridor is enhanced through its connection to the proposed extension of the Kitty Roedel Trail.

Dolphin Station Theme:

Coordinated Growth Area

» Balance need for direct auto and truck access from the Florida Turnpike and Dolphin Expressway against future development.

» Accommodate current plans for the Florida Turnpike interchange ramps, the Beacon Lakes DRI master plan, and multimodal transit facilities.

» Introduce new north-south street to provide better connectivity north and south of NW 12th Street.

» The station's link to other stations along the corridor is enhanced through its connection to the proposed extension of the Kitty Roedel Trail.

NW 107TH Avenue Station Theme:

Multimodal Transit District

» Introduce high-density, transformative redevelopment:

- Building heights up to 30 stories at station (subject to MIA flight path height restrictions).
- Joint development adjoining and connecting station to private development.
- Iconic intermodal transit center and community focal point.
- Point towers to raise transit visibility.
- Building height and density gradation down to NW 14th Street.

» Break down blocks to create fine-grained, mixed-use district:

- Introduction of radials and smaller blocks to promote walkability, bicycling, and to create attractive vistas.
- Integration of legible street hierarchy.

» Phased mall restructuring provides commercial anchor to new district and tied to each other by improved NW 14th Street.

» A pedestrian bridge over NW 107th Avenue between the two curvilinear blocks along NW 12th Street provides above grade connection between the station and future high density mixed-use development.

» The station's link to other stations along the corridor is enhanced through its connection to the proposed extension of the Kitty Roedel Trail.

NW 137TH Avenue Station TOD Vision Plan

Plan Overview

NW 137th Avenue Station is the proposed western terminal of the CSX East-West Corridor, and located at the southwest corner of the intersection of NW 137th Avenue and NW 12th Street. As shown in Figure 5.1, there are considerable physical constraints within this zone, which include the following:

- The Urban Development Boundary bisects the station area, effectively excluding the northwestern quadrant of the intersection from future development.
- The Dolphin Expressway's on and off-ramps, in addition to the NW 137th Avenue right-of-way width, are significant physical barriers between the station and established residential communities to the east.
- The northeastern quadrant of the intersection is occupied by high-tension towers and vacant industrial lands designated for other uses.
- Potential westward extension of the Dolphin Expressway may limit station siting flexibility.

Due in part to these physical and land use characteristics, the TOD character theme envisioned for the NW 137th Avenue Station is a "Stand-Alone Station." It is envisioned that this station will predominately support intermodal transfers and train storage and light maintenance activity, with some land reserved for mid-to-long term transit supportive build-out. The NW 137th Avenue TOD Vision Plan, as shown in Figure 5.1, prioritizes the provision of developable blocks that could accommodate potential desirable public facilities, such as a water treatment plant, while preserving the potential for transit-supportive development that serves the station.

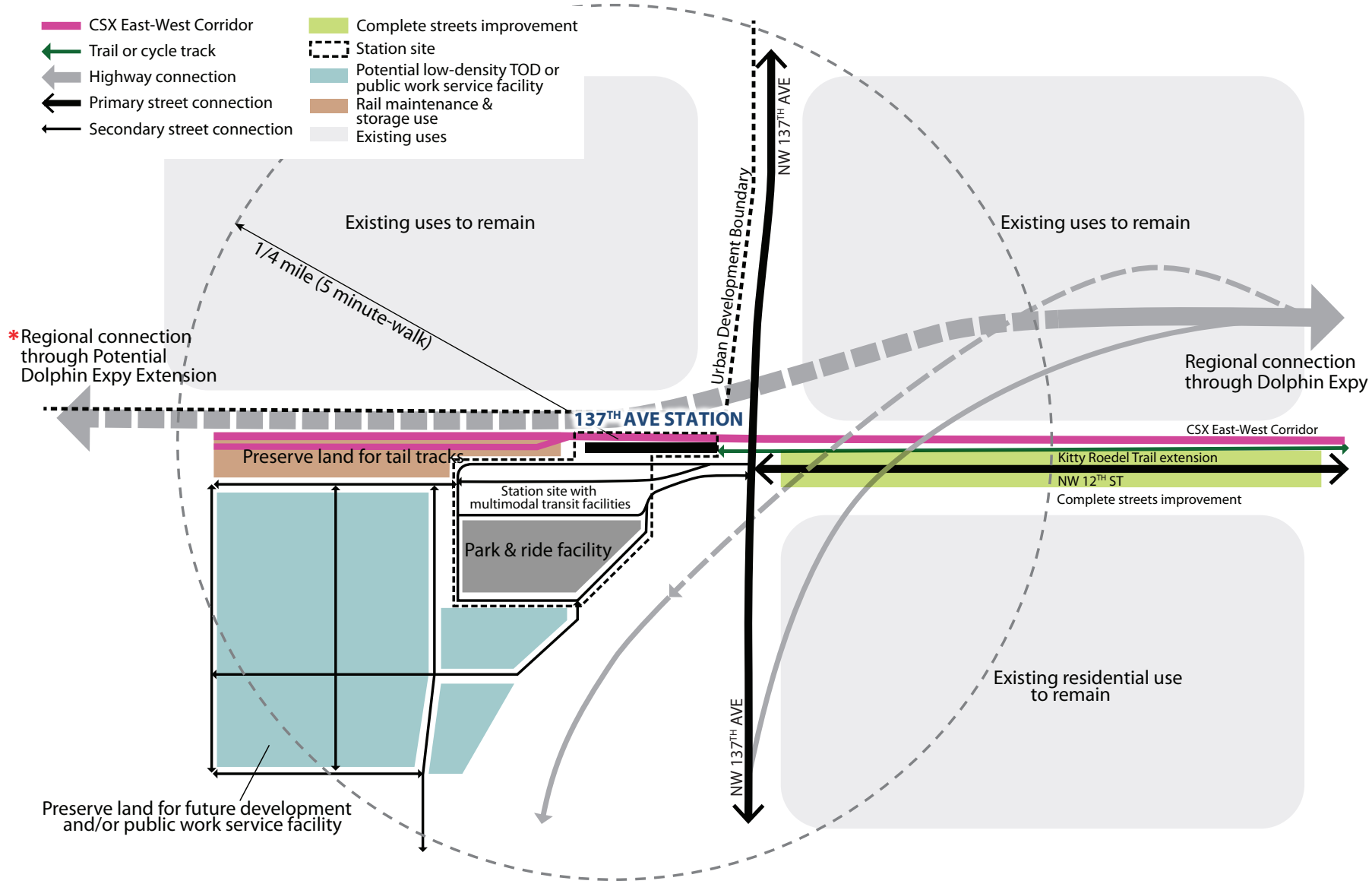


Figure 5.1 - NW 137th Avenue Station TOD Vision Plan

*Dolphin Expressway extension depicted was one of two potential alignments; an alignment contouring NW 137 Avenue (not depicted) was advanced in September 2016.

NW 137TH Avenue TOD Theme: Stand Alone Station

Key Plan Features

The following are the key features of the TOD vision plan for NW 137th Avenue Station:

- The station platform is adjacent to a four-bay bus berthing area and a pick-up and drop-off area to minimize transfer distance. Approximately 280 parking spaces are provided for transit riders.
- Additional space is preserved at the end of the rail track for train storage and light maintenance facilities.
- The plan preserves the potential to accommodate the potential future western extension of the Dolphin Expressway by the Miami Dade Expressway Authority.
- The intersection of NW 137th Avenue and NW 12th Street will be redesigned to support auto and bus access to the proposed station location while allowing for safe pedestrian crossing.
- Complete Streets improvements and streetscape enhancements are provided along NW 12th Street to improve connections between the proposed station and the residential community to the east. The Kitty Roedel Trail is extended to this station along the north side of NW 12th Street to provide off-street pedestrian and bicycle access to the station.
- Approximately 18 acres of land are preserved as a series of interconnected blocks for potential future transit-supportive development.

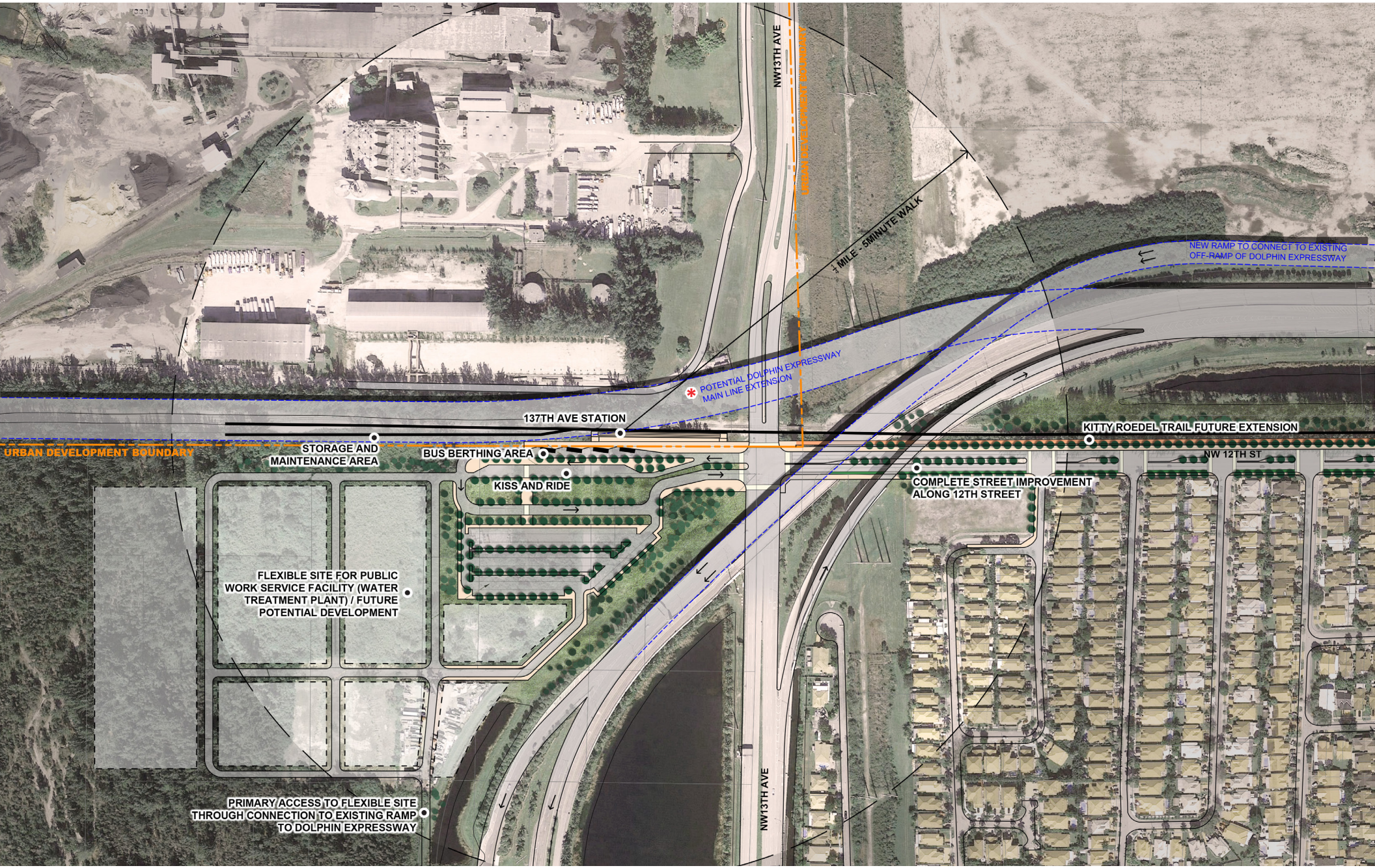


Figure 5.2 - NW 137th Avenue Station TOD Concept Layout

*Dolphin Expressway extension depicted was one of two potential alignments; an alignment contouring NW 137 Avenue (not depicted) was advanced in September 2016.

NW 82ND Avenue Station TOD Vision Plan

Plan Overview

The NW 82nd Avenue Station is located in southeast corner of the City of Doral, less than a half mile west from the Palmetto Expressway. Existing land uses and site development patterns in the station area include a discontinuous rectilinear street grid predominately developed with light industrial uses (e.g. warehousing), low-rise office buildings surrounded by parking fields, and water detention ponds. With convenient access to the airport and regional highway, this station area currently contains a high concentration of warehouses and big-box retail centers that are major drivers of Doral's local economy. Any future TOD should consider impacts to these important uses and minimize negative impact to their operation.

A fundamental challenge to TOD in this station area is that the building form and discontinuous block structure along NW 82nd Avenue provides access challenges between the proposed transit facilities and existing and future uses. The vision for this station area is to leverage the current aesthetic appeal of NW 82nd Avenue's tree-lined boulevard and to "compress" the vehicle corridor to create a "Walkable Transit Spine" (this station's TOD character theme) that connects the residential community to the south of the Dolphin Expressway and rail corridor to the station and northward to greater Doral. The NW 82nd Avenue Station TOD Vision Plan focuses on reconfiguring the block structures to improve walkability along major streets while preserving most of the industrial uses at the edges of NW 82nd Avenue and NW 12th Street blocks.

This improvement is, in essence, an inverted T-form, as shown in Figure 5.3 and Figure 5.6, and forms the armature for the concentration of future TOD, with existing light industrial development preserved behind. New high-rise mixed-use buildings – between 8 and 14 stories in height (subject to MIA flight path restrictions) – are built to the street and wrap parking structures, providing active ground floor uses – such as sales and service retail and restaurants with outdoor space – and a highly walkable and pedestrian friendly public realm along NW 82nd Avenue. The illustrative cross-sections shown in Figure 5.4 and Figure 5.5 visually depict the envisioned streetscape improvements along NW 82nd Avenue and their relationship to potential future development along the corridor.

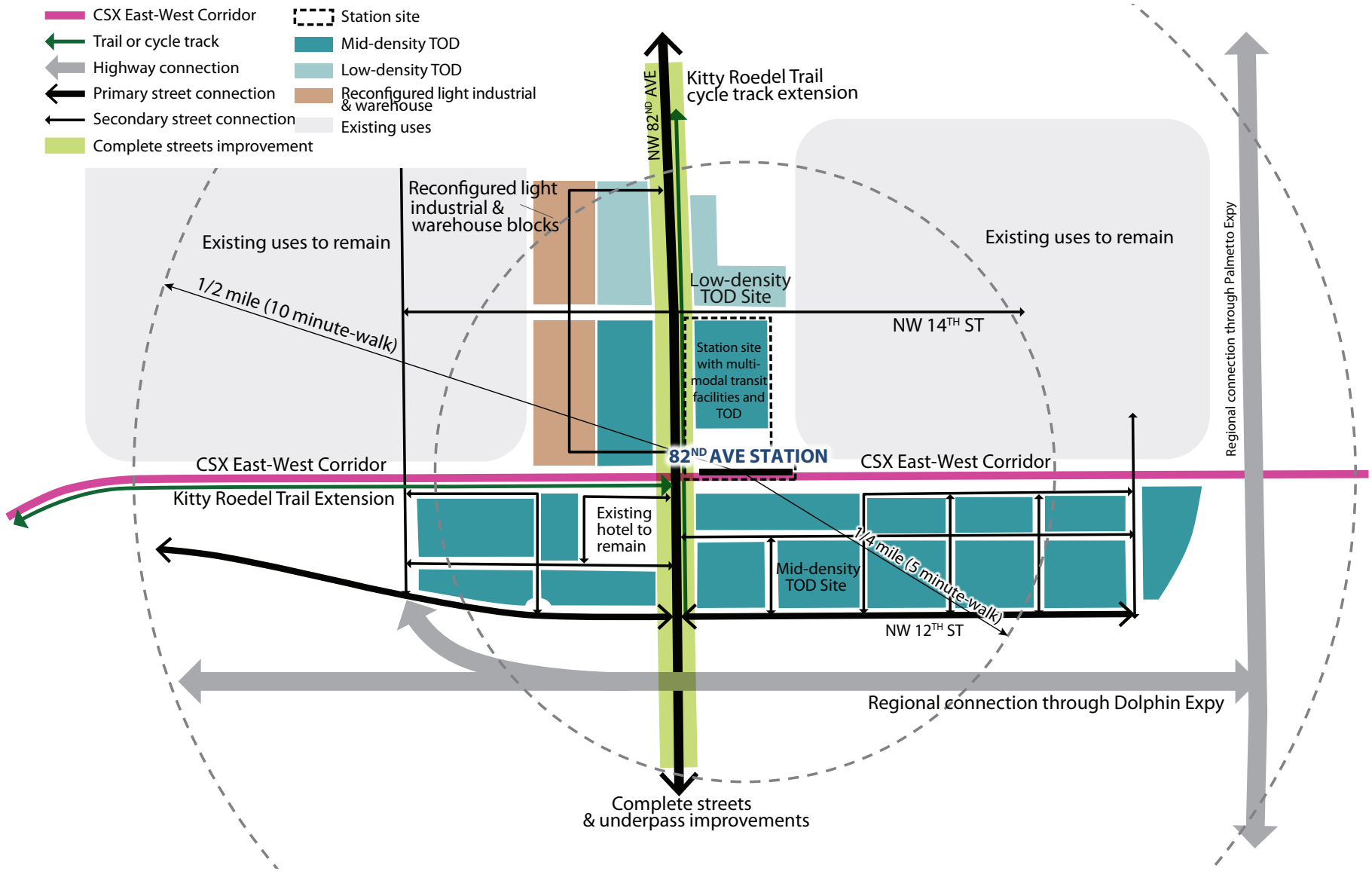


Figure 5.3 - NW 82nd Avenue Station TOD Vision Plan

NW 82ND Avenue Station TOD Vision Plan

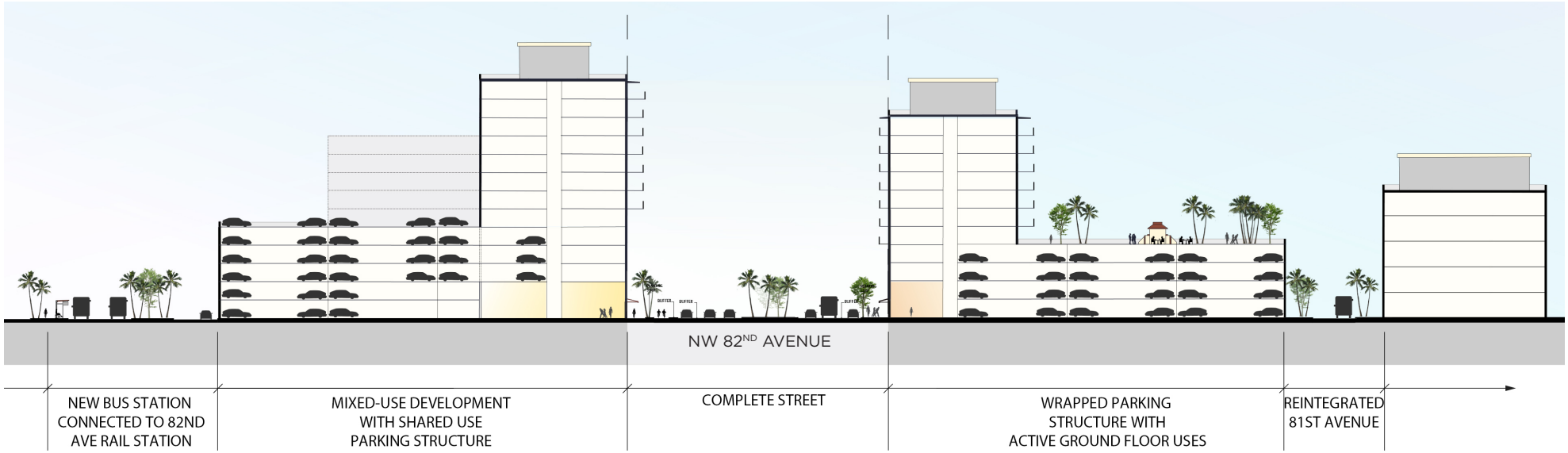


Figure 5.4 - Cross-Section of the blocks flanking NW 82nd Avenue, looking South

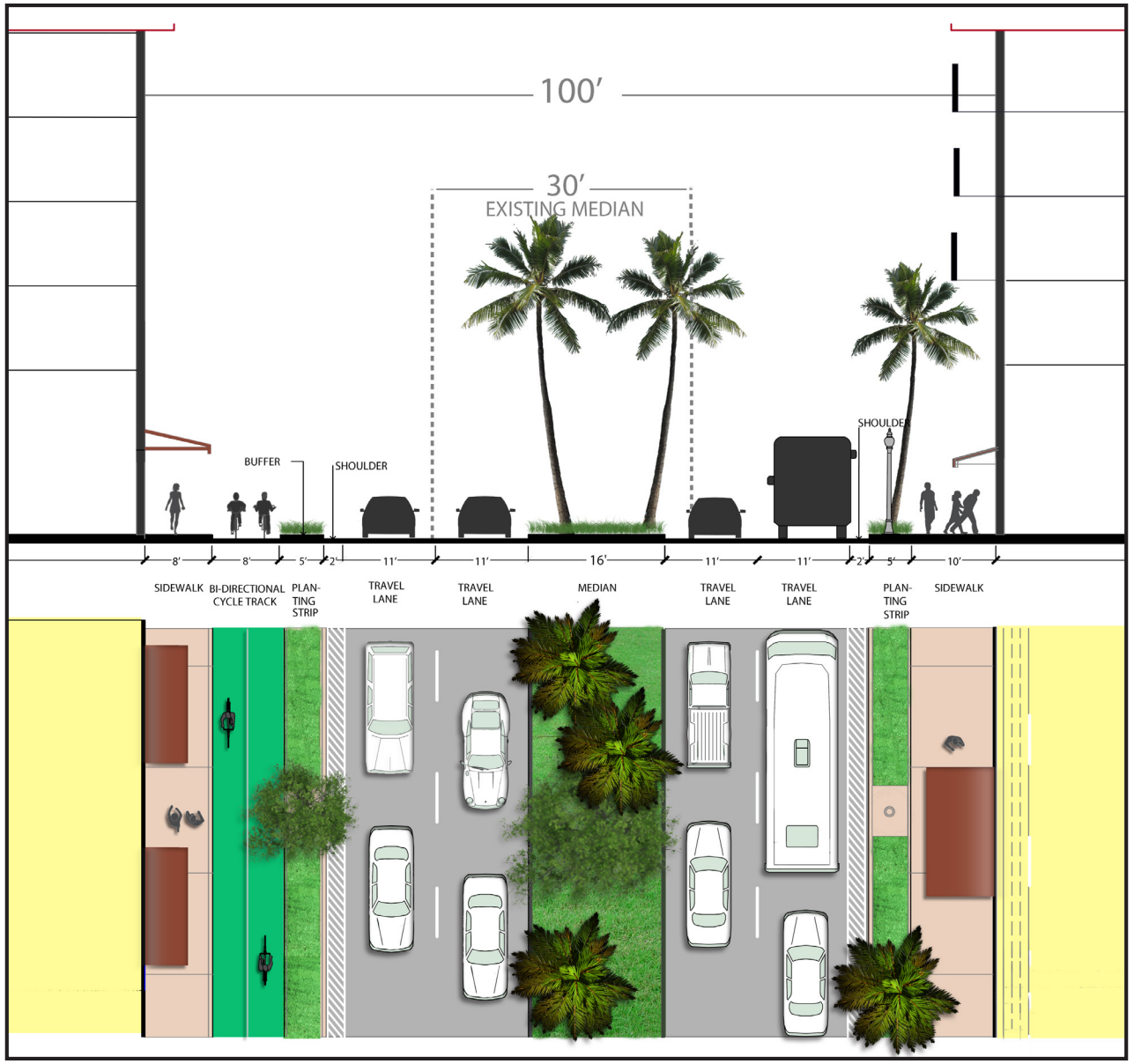


Figure 5.5 - Cross-Section of the NW 82nd Avenue Right-of-Way Looking South

NW 82ND Avenue TOD Theme: Walkable Transit Spine

Key Plan Features

The following are the key features of the TOD vision plan for the NW 82nd Avenue Station:

- The NW 82nd Avenue rail station platform is connected to a five-bay bus station and a pick-up and drop-off area. Rail and bus riders have direct access to a shared use parking structure wrapped with high-rise mixed use development and active ground floor. There is enough space to provide a multi-use garage with approx. 900 parking spaces for use by transit riders and private patrons and future residents.
- NW 82nd Avenue is a central spine where most TOD is concentrated. Pedestrian and bicycle comfort and safety will be improved through widening the sidewalks, adding pedestrian crosswalks, planting more street trees and introducing other pedestrian and bicycle amenities. An off-street two-way cycle track will run along the east side of NW 82nd Avenue from the rail station to Downtown Doral and have direct linkage to the Kitty Roedel Trail to the south.
- NW 82nd Avenue is extended underneath the Dolphin Expressway viaduct to connect to the residential community south of the highway. This underpass will include sidewalks and a cycle track to allow for better pedestrian and bicycle access from this community to the rail station.
- The proposed TOD along NW 82nd Avenue will create a continuous street wall along the sidewalk. NW 82nd Avenue may be framed with high rises and lined with active ground floor uses to help create the pleasing perception of an “outdoor room.” Parking structures and existing truck maneuvering and loading areas will be relocated to the back of buildings to continually serve the warehouses remaining at the edges of the core NW 82nd Avenue and NW 14th Street blocks.
- With exceptional access to NW 12th Street and the highway system, land between the CSX East-West Corridor and NW 12th Street are envisioned as higher density office development and mid-density residential development.

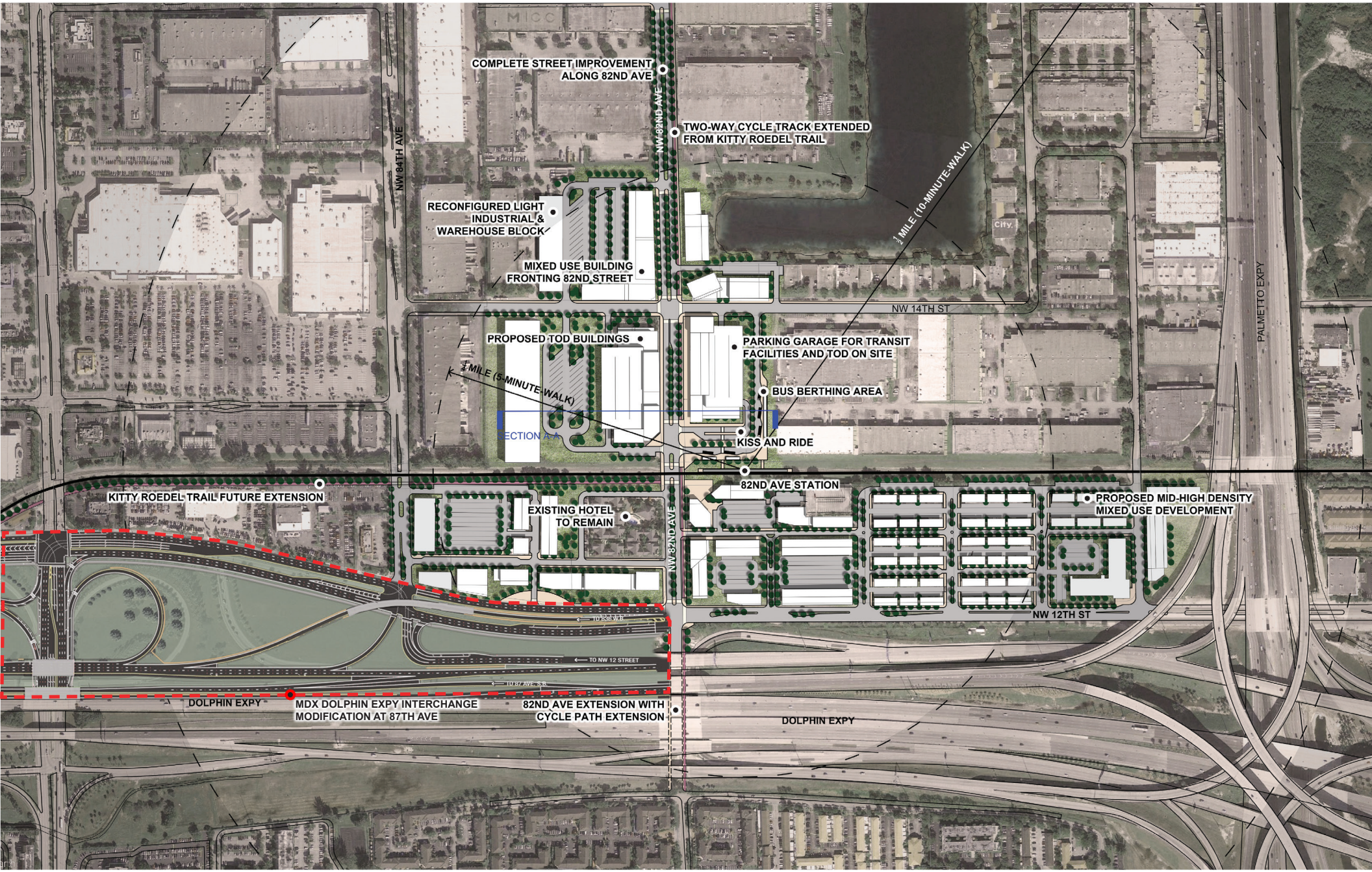


Figure 5.6 - NW 82nd Avenue Station TOD Concept Layout

Dolphin Station TOD Vision Plan

Plan Overview

There are currently many plans for the land within a half-mile radius of Dolphin Station. For example, a park-and-ride/transit terminal facility is proposed to serve the nearby cities of Sweetwater and Doral. This area was also identified as the site for new on and off ramps connecting the Florida Turnpike to the Dolphin Expressway through a joint effort between MDX and Florida Turnpike Enterprise. A 480-acre industrial/warehouse, commercial/retail and office development is proposed for the land directly north of the Expressway and west of the Florida Turnpike by AMB Codina Beacon Lakes. These development and public infrastructure plans are in various stages of design, review, and approval, and are not coordinated to the extent that they can accommodate future TOD around the proposed Dolphin Station.

The station area is occupied by the NW 12th Street interchange ramps, water retention ponds, and vacant land. Given the current proposals for public infrastructure and development, land remaining for TOD is highly limited. A key challenge is to effectively integrate and coordinate the future improvements that maximizes value of and preserves the ability to introduce TOD that serves the future rail station. The interchange ramps, as proposed by MDX, encumber the critical 5-minute walk zone around the station, and substantially reduces the potential to coordinate planned development and future TOD. These challenges are highlighted in Figure 5.8.

Given these current proposals and considerable challenges, the TOD vision plan, as shown in Figure 5.7, focuses on facilitating a “Coordinated Growth Area” (this station’s TOD character theme) and is organized along the newly built NW 120th Avenue and NW 122nd Avenue road segments. These segments could be built by the county or private developers as the development demand dictates. As shown in Figure 5.7 and Figure 5.8, future TOD is concentrated along a proposed new NW 120th Avenue, which will serve as the main pedestrian corridor leading to Dolphin Station. NW 122nd Avenue will be extended from the existing residential community south of the Dolphin Expressway to NW 12th Street and adjacent TOD blocks. The proposed segment of NW 122nd Avenue serves as an arterial providing vehicular access to and from Dolphin Expressway. A reconfigured ramp system – moved from the current proposed location to the southwest - maximizes development opportunity within the 5-minute-walk zone around the rail station. Through an interconnected series of streets serving the station area and innovative use of storm water detention ponds for park space, new development is coordinated, linked, and sited to maximize TOD immediately adjacent to Dolphin Station.

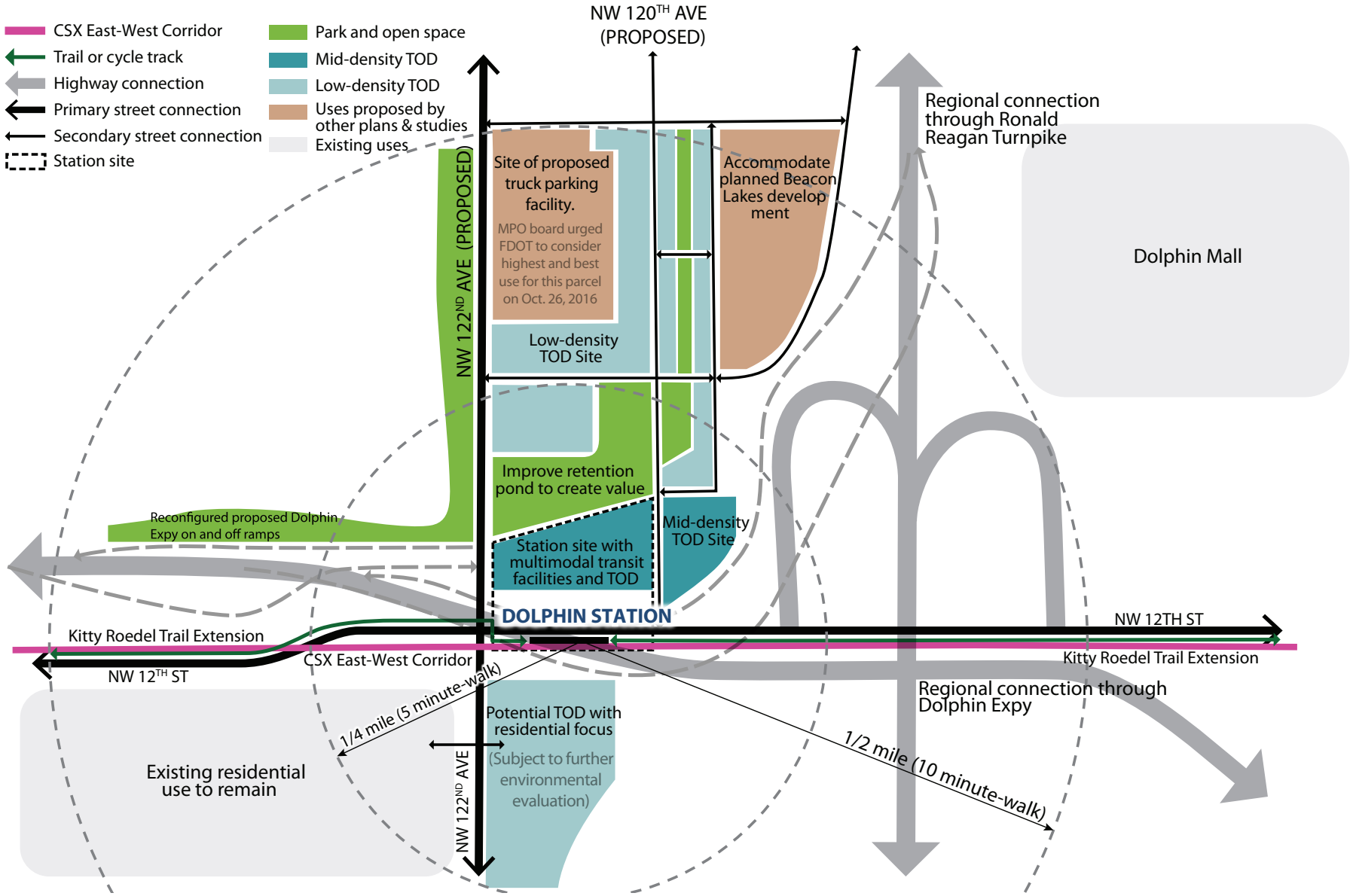


Figure 5.7 - Dolphin Station TOD Vision Plan

Dolphin Station TOD Theme: Coordinated Growth Area

Key Plan Features

The following are the key features of the TOD vision plan for Dolphin Station:

- The Dolphin Station platform is located on the south side of NW 12th Street and connected to the pick-up and drop-off area and bus berthing area via mid-block pedestrian crossing. The ten-bay bus facility serves express and local bus lines. The adjacent 350-space park and ride lot is shared by transit uses and tenants from the adjacent mixed-use development.
- A newly built road, NW 120th Avenue, is the central corridor along which TOD is concentrated. The street will be lined with three-to-five stories buildings with active ground floor uses. A cluster of mid-density apartment and office buildings are proposed within 5-minute walk distance to Dolphin Station. The proposed segment of NW 122nd Avenue offers the potential for future residential development south of NW 12th Street with convenient access to Dolphin Station, and provides opportunity to expand the existing development further east.
- The Beacon Lakes Master Plan proposes 495,000 square feet of retail development, part of which is located between the TOD and the Turnpike. NW 122nd Avenue is a primary access road that helps separate truck traffic from vehicular, pedestrian and bicycle traffic.
- A park and open space system, with direct linkages to the extended Kitty Roedel Trail along NW 12th Street, is provided as a central organizing element near the station and adds value to the Beacon Lakes development and adjacent TOD. A series of passive recreational spaces is formed around existing and new storm water detention ponds so these site features serve dual purpose – as storm water storage and community gathering places.

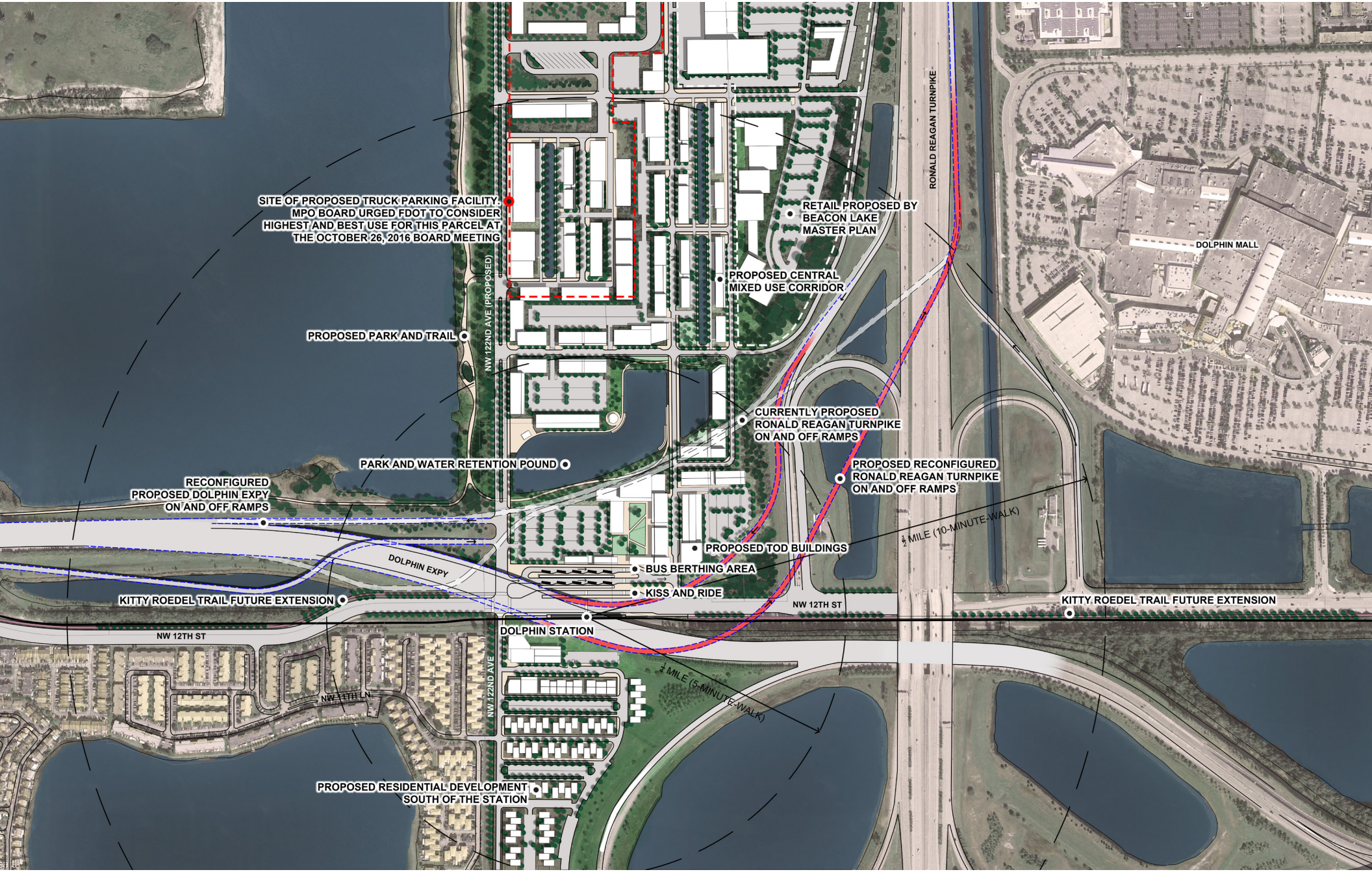


Figure 5.8 - Dolphin Station TOD Concept Layout

NW 107TH Avenue Station TOD Vision Plan

Plan Overview

NW 107th Avenue Station has the most transformative TOD potential of the four (4) selected stations. Of note is that, unlike the other three (3) stations, the area within a 10-minute-walk of the proposed station contains approximately 70 acres of vacant land and a number of underutilized large parcels. The station area is flanked by major regional and international commercial attractions – International Mall and Dolphin Mall. Florida International University's main campus is a major institutional anchor to the south. In combination, these assets provide a strong foundation for future TOD.

NW 107th Avenue Station is envisioned as a large scale mixed-use urban neighborhood – a "Multimodal Transit District" (its TOD character theme) – and contains a hierarchical framework of streets and blocks on which a variety of TOD densities are developed. The full spectrum of land uses are envisioned – from office, hotel, retail, entertainment, and residential apartments and townhouses to Research and& Development (R&D) uses. The district is connected via a ribbon of recreational green spaces and waterbodies.

As shown in Figure 5.9, the station area's streets are laid out as a rectilinear grid. Radial paths are introduced to break up the monotony of the grid and to provide more direct connections from points north to new transit facilities envisioned at the intersection of NW 12th Street and NW 107th Avenue. The principal axes are NW 107th Avenue, which contains a 100-foot wide landscaped median and multiuse path, and an improved NW 14th Street, which provides direct east-west connectivity between the International and Dolphin Mall sites. In this vision, NW 107th Avenue will be reconfigured to improve the pedestrian experience. Turning lanes will be reduced or eliminated where possible, and a greater share of the right of way will be allocated to pedestrians.

The land between NW 12th Street and the rail corridor, west of NW 107th Avenue, is dedicated to multimodal station facilities and potential high-density joint development. The multimodal station, which includes an enclosed rail head house, bus berthing area, shared parking structure, and active transit plaza, is integrated into a 30-story office tower that serves as the district's signature building and its souring height provides a skyline symbol of transit, which improves transit visibility and district wayfinding. The parcels on the east side of NW 107th Avenue, between NW 12th Street and the rail corridor, have significant potential to be turned over to higher density development that could be directly connected to the station via pedestrian bridge over NW 107th Avenue.

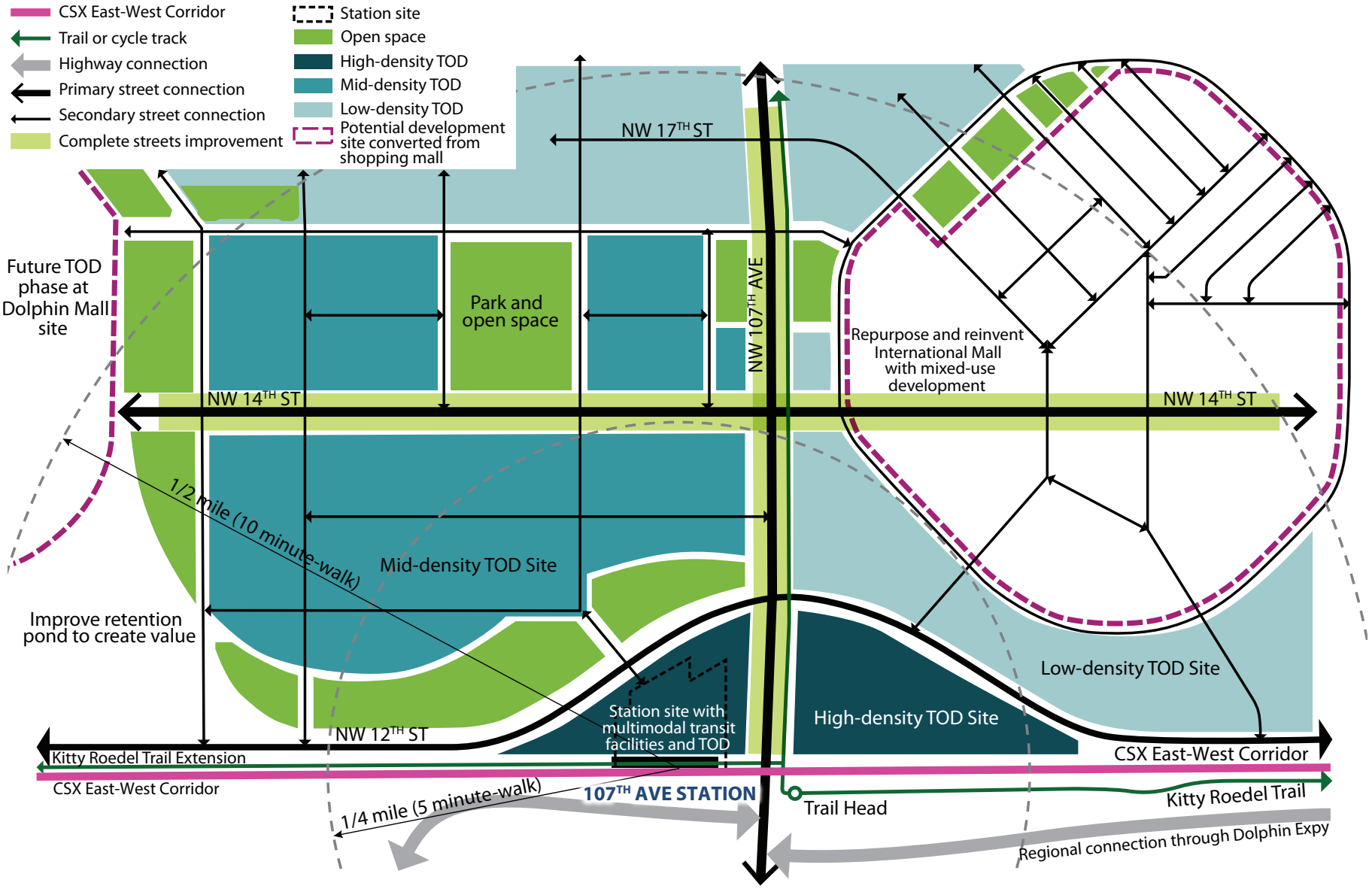


Figure 5.9 - NW 107th Avenue Station TOD Vision Plan Density Diagram

NW 107TH Avenue Station TOD Vision Plan

A critical feature and placemaking element of the plan is the reimagining and reconfiguration of the International and Dolphin Mall sites and the integration of a canal along NW 14th Street. The aging International Mall, opened in the early 1980s, and the newer Dolphin Mall, opened in the 2000s, have the potential to be reinvented and redeveloped. Their traditional auto-centric layout consume a large amount of land within the station area. With the expected increase in land value brought about by transit investments, the malls may have tremendous opportunity to be reconfigured into live-work-play subdistricts and connected by an improved NW 14th Street. As shown in Figure 5.9 and Figure 5.12, International Mall is redeveloped first and contains mid- to high-density commercial and office buildings, low- to mid-density residential houses, community amenities and open space. Dolphin Mall is identified as the site for long-term TOD plan and could be built out in future phases. NW 14th Street ties them together, lined with active ground floor uses and a wide canal in the center of the street, providing both storm water capacity and aesthetic value to new development.

Figure 5.10 - CSX tracks crossing NW 107th Avenue, looking West

Figure 5.11 - The start of the Kitty Roedel Trail at NW 107th Avenue, looking East

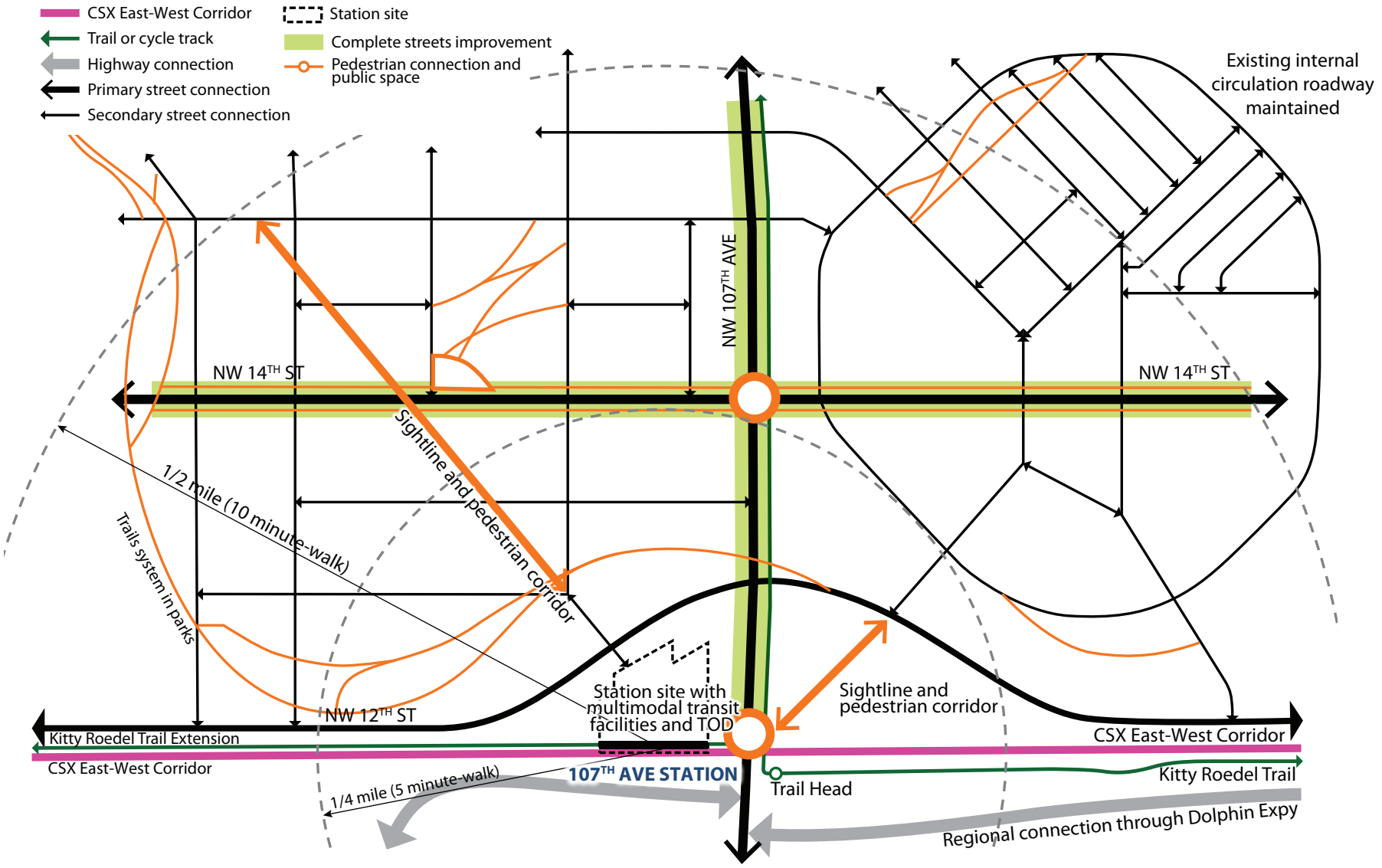


Figure 5.12 - NW 107th Avenue Station TOD Vision Plan Circulation Diagram

NW 107TH Avenue TOD Theme: Multimodal Transit District

Key Plan Features

The following are the key features of the TOD vision plan for NW 107th Avenue Station:

- NW 107th Avenue Station contains a signature multi-modal transit facility with an enclosed rail head house and five-bay bus station and parking structure – directly connected to high-density TOD above. The station complex will front transit plazas along NW 107th Avenue and NW 12th Street. Views to new high-rise development above the station will be preserved from northern parts of the district through the provision of radial sightline corridors. A pedestrian bridge is proposed to improve connections between the station and the area east of NW 107th Avenue.
- The block structure and building footprints near the station reflect the unique curvature of NW 12th Street. To create a well-functioning mixed-use urban district, the TOD Vision Plan introduced rectilinear blocks while preserving curvilinear open space echoing the geometry of NW 12th Street. Pedestrian corridors radiate from the centers of the station blocks creating direct sightlines to the station complex.
- New mixed-use blocks are sited to the south of NW 14th Street, between NW 111th Avenue and NW 107th Avenue. These are primarily five to seven story commercial-residential mixed-use buildings with active uses on the ground floor. Office and R&D facilities are envisioned between NW 14th Street and NW 17th Street, west of NW 107th Avenue. International Mall is reconfigured into blocks of different sizes to accommodate a diversity of uses including large scale commercial, commercial-residential mixed-use, and low- to mid-density residential.
- An interconnected system of parks, open spaces and plazas serves the future community. This system of green spaces provides amenities to key parcels in the station area, mitigates potential impacts from the addition of impervious surface, and adds value to TOD. Pedestrian plazas are proposed at the two focal points: the intersection of NW 107th Avenue and NW 12th Street and the intersection of NW 107th Avenue and NW 14th Street. These two locations will be the centers for live, work, and play activities where the community gathers for events on the transit plazas, shops in nearby stores, and accesses the NW 14th Street canal and multiuse path along NW 107th Avenue.
- NW 107th Avenue will be widened to incorporate an 80-foot wide green median for recreational use. NW 107th Avenue will redesigned to become a boulevard – with a wide median that allocates space for walking and bicycling. A multiuse path will run on the median and bring pedestrian and bicycles access to the Kitty Roedel Trail, and the station.
- A trailhead is proposed at west end of the existing Kitty Roedel Trail. From here, the trail users could either enter the station through the pedestrian bridge over NW 107th Avenue, or continue west along the extended portion of the trail towards Dolphin Station, or use the multiuse path along NW 107th Avenue to access the TOD district and Doral.

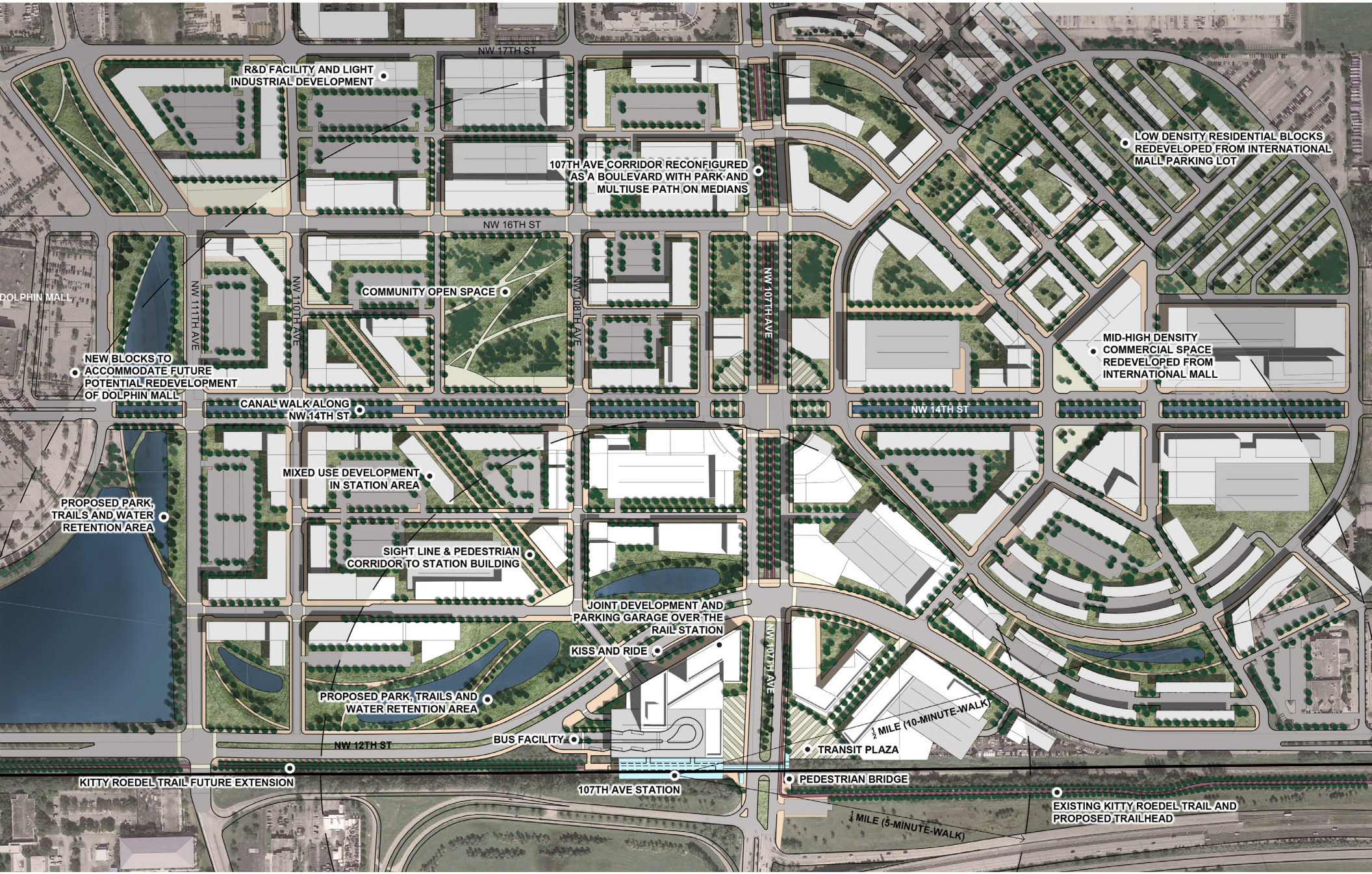


Figure 5.13 - NW 107th Avenue Station TOD Concept Layout

NW 107th Avenue Station

TOD Concept Rendering

Looking Southeast

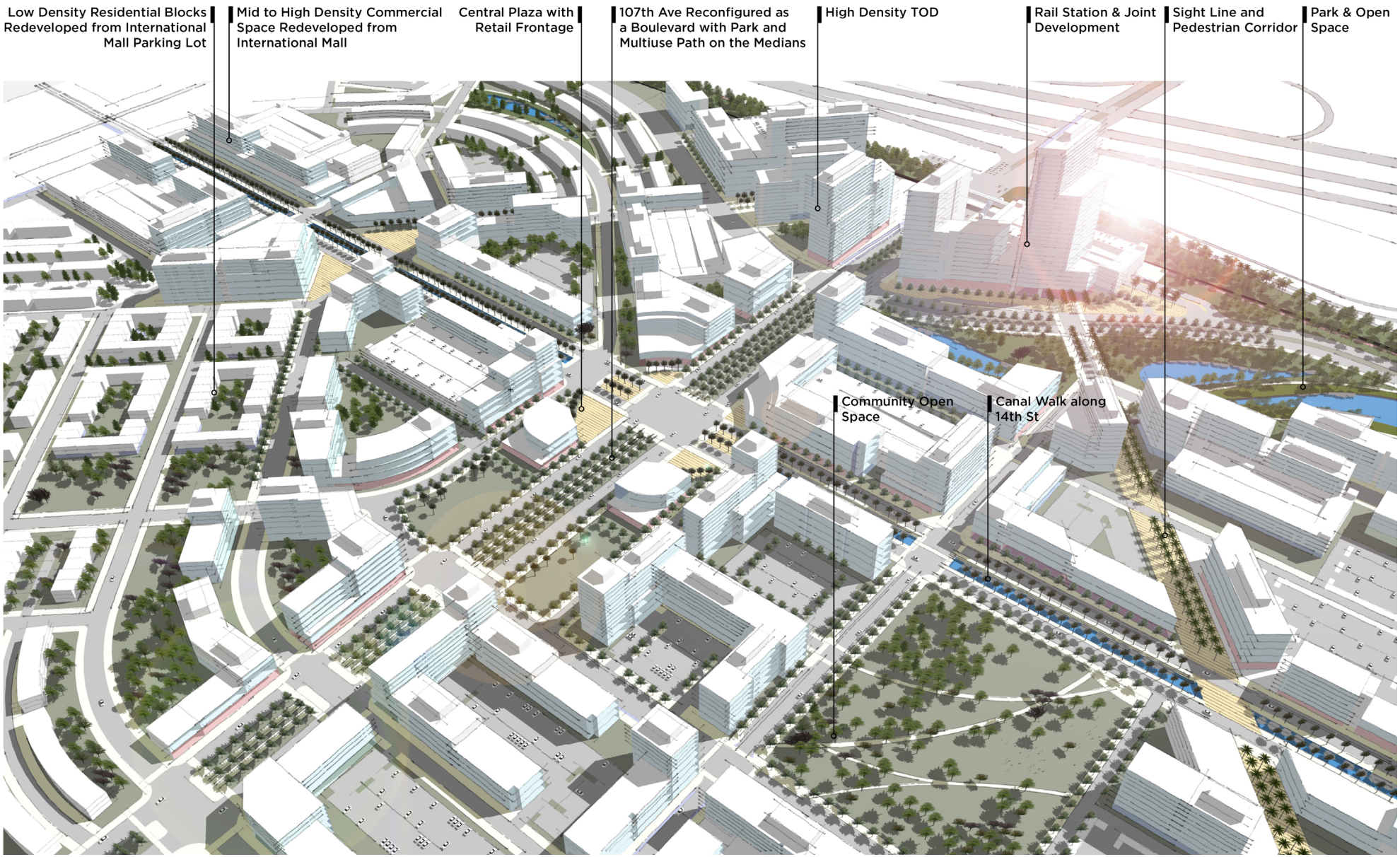

Low Density Residential Blocks Redeveloped from International Mall Parking Lot
Mid to High Density Commercial Space Redeveloped from International Mall
Central Plaza with Retail Frontage
107th Ave Reconfigured as a Boulevard with Park and Multiuse Path on the Medians
High Density TOD
Rail Station & Joint Development
Sight Line and Pedestrian Corridor
Park & Open Space
Community Open Space
Canal Walk along 14th St

Figure 5.14

NW 107th Avenue Station

TOD Concept Rendering

Looking Northwest

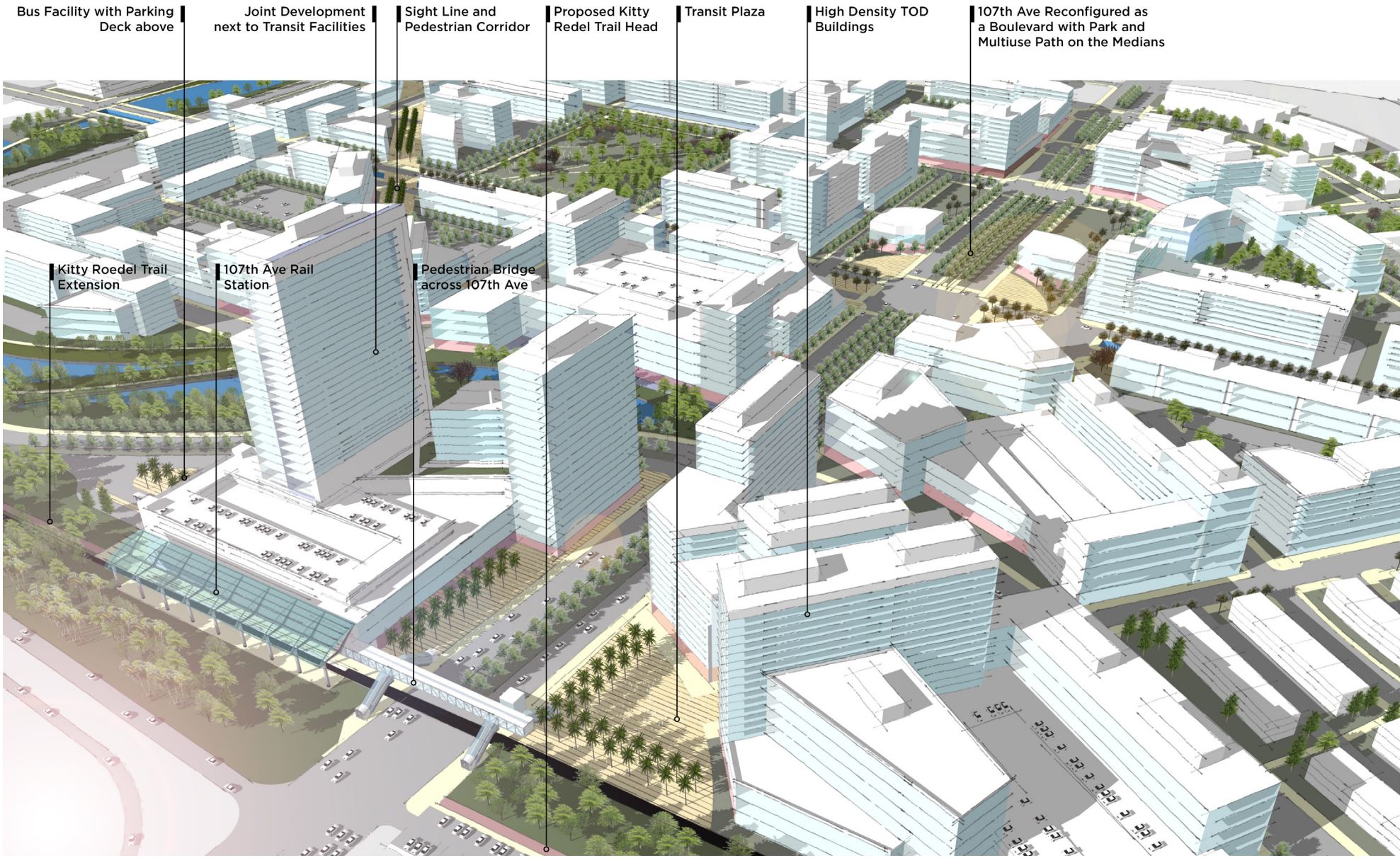

Bus Facility with Parking Deck above
Joint Development next to Transit Facilities
Sight Line and Pedestrian Corridor
Proposed Kitty Redel Trail Head
Transit Plaza
High Density TOD Buildings
107th Ave Reconfigured as a Boulevard with Park and Multiuse Path on the Medians
Kitty Roedel Trail Extension
107th Ave Rail Station
Pedestrian Bridge across 107th Ave

Figure 5.15

Chapter 6
Economic Impact Potential

CSX East-West Corridor Value Capture Analysis

In April 2016, the Miami-Dade Citizens' Independent Transportation Trust (CITT) prepared a Value Capture Analysis for the East-West Corridor report. This document presents value capture estimates for the CSX East-West Corridor to determine how increased property values resulting from an infrastructure improvement investments could be utilized as a funding source for a new project and/or service based upon the establishment of special taxing districts.

The CITT report analyzes properties that are within a half-mile and one-mile along each side of the proposed CSX East-West Corridor. Those properties under government and/or public use (e.g., water bodies, parks, utilities, government buildings) were excluded from the value capture analysis. Three value capture approaches were evaluated to include the following

- Assessment District 1 which is based on an annual ad valorem assessment on property assessment values;
- Assessment District 2 which is based on a specific annual assessment on the project total floor area;
- Tax Increment Financing based on ad valorem annual assessment on incremental property assessment values and incremental floor are development.

Various development growth rates were applied to represent a slow, medium, and fast according to different assessment scenarios to include $.10, $.20 and $.50 for $1,000 of property assessment values and per square foot of floor area along the corridor. By applying the slow growth rate (50 percent of future development in 25 years) a resulted in an estimated range of total bond issuance capacity over 10 years as follows:

- Assessment District : $8M to $40M
- Assessment District 2: $54M to $268M
- Tax Increment Financing: $169M to $ $334M

Due to the sparse real estate development along the corridor the CITT report implies that transit facilities could significantly lead to new real estate development. In looking at the previously illustrated TOD vision for each of the four (4) station area helps to further substantiate the CITT Analysis results given the potential opportunity of additional development throughout the entire CSX East-West Corridor. Additional information and detail regarding the CITT Value Capture Analysis is available at www.miamidade.gov/CITT.

The purpose of this section is to provide detail on the possible creation of Special Assessment Districts for purposes of providing a viable funding source for the proposed CSX East-West Corridor. A brief description of those funding sources are identified based upon a review of existing State Statutes is provided in the following section.

[1] **Value Capture Analysis East-West Corridor, Miami-Dade CITT, April 2016**

Special District (Dependent)

Dependent special districts are created to finance, construct, operate and maintain capital infrastructure, facilities, and services. These districts enable a county or municipality to collect funds for a specific project by levying millage on property within their jurisdiction. However, unlike general county or municipal government levies, special districts are special-purpose entities with explicit authority to provide a specialized service with the revenue being collected – it cannot be used for other purposes. Dependent special districts are permissible under Chapter 189, Florida Statutes.

Special District (Independent)

As with dependent special districts, independent special districts are created to finance, construct, operate and maintain capital infrastructure, facilities, and services. Unlike dependent districts, independent special districts are not limited to a single jurisdiction and may encompass multiple counties or municipalities, and are governed by a board appointed or elected by the governing body or property owners within its jurisdictions. Independent special districts are permissible under Chapter 189, Florida Statutes.

Program Name / *Legislative Reference*	Revenue Type	Implementation Action	Geographical Application	Notes
Special District (Dependent). *FS: 189*	Property Tax Assessment	Ordinance	City / County	Millage rates can vary. Must be entirely within one city or county. (2)
Special District (Independent – non-RTA). *FS: 189*	Property Tax Assessment	Local Ordinance or Charter Amendment. (3)	City / County	Millage rates vary.
Special District (Independent - RTA). *FS: 189 / FS:163 (1)*	Property Tax Assessment	Local Ordinance or Charter Amendment. (5)	City / County	Millage rates vary up to 3 mills. (4)
Community Redevelopment Districts. *FS:166*	Property Tax Increment	Requires blight / slum	Redevelopment area	Intended for redevelopment projects. Uses exclude transportation.

(1) Regional Transportation Authority (RTA) as created under FS.189.
(2) Millage rates implemented must be within the millage limit of the local government (consumes a portion of their millage capacity).
(3) Local Government Ordinance with approval of landowners in the district.
(4) May include several jurisdictions. Must cover the entire area of each jurisdiction that is included in the interlocal agreement.
(5) RTA must be created by agreements between 2 or more jurisdictions (County or City). No jurisdiction may be a member of more than one RTA. Referendum required for property assessment/bond issuance.

Regional Transportation Authority

A Regional Transportation Authority (RTA) is a type of independent special district created for the express purpose of funding a transportation program. Under current law any millage levied by an RTA is subject to voter referendum and may not exceed three mills on taxable real property within the RTA's jurisdiction. RTAs are permissible under Chapter 163, Florida Statutes; however, under current law each local government in the corridor would have to "opt in" to create the RTA funding source. The parcels subject to the special district would be determined based upon the TOD station area plans. Legislative changes would be needed to provide a nexus for the RTA in law to the existing South Florida Regional Transportation Authority (given its jurisdiction within the three county area to include Miami-Dade County) and also to allow property assessments other than the geographical boundary of the local governments included in the RTA district.

Community Redevelopment District

Community Redevelopment Districts (CRDs) are a type of independent special district created for the express purpose of redevelopment and revitalization of slum or blighted areas. CRD designation allows a jurisdiction to use tax increment financing (TIF) and special assessments to support a redevelopment trust fund. Funds deposited into the trust fund are used by the redevelopment agency to finance any community redevelopment undertaken pursuant to the community redevelopment plan. CRDs are permissible under Chapter 163, Florida Statutes.

Tax Increment Financing Districts (TIFs) are allowable as per the Florida Community Redevelopment Act of 1969 as a mechanism to finance infrastructure improvements and help transform areas of blight into desirable places. In Miami, TIF districts have been commonly implemented to capture increasing property values near capital infrastructure improvements. A TIF district is a special assessment zone that retains the increase in tax revenues from rising property values of existing development as well as the incremental new development that occurs in response to the infrastructure improvement being implemented.

Successfully Implemented Assessment Districts

The feasibility of assessment districts have become an attractive financing strategy for capital infrastructure projects throughout the country. An overview of several transportation capital investments is provided to demonstrate the implementation of value capture strategies such as special assessment districts.

Charlotte, North Carolina

Charlotte Red Line Commuter Rail

This is a proposed 26 mile commuter rail line that is planned to serve the Charlotte, North Carolina metropolitan area. The outcome of extensive planning work and stakeholder collaboration resulted in the recommendation to establish an Interlocal Agreement or Joint Powers Authority (JPA) that would fund both the construction and operation of the proposed commuter rail service. Assessment districts are proposed to be formed within the same boundaries as the Tax Increment Financing (TIF) district boundaries with 100 percent of the annual assessment being allocated to the JPA. The cities along the commuter rail corridor would also allocate 75 percent of the tax increment revenues to the project.

Phoenix, Arizona

Valley Metro

The regional transportation authority in the Phoenix region, Valley Metro is embarking on a program to use value capture revenues to advance the development of selected TOD sites, working with the cities of Phoenix, Tempe, Mesa and Glendale, the development community and various non-profit organizations that are supporting and in part financing TOD projects.

Northern Virginia

Washington Metropolitan Area Transit Authority Silver Line

The Dulles Corridor Metrorail project, also known as the Silver Line, is being partially funded by special assessments on commercial and multifamily residential properties adjacent to the transit corridor. The creation of the special district required the written approval of the majority of the affected landowners.

Fairfax County provided approximately $400 million in capital to Phase 1 of the Silver Line Project, from debt proceeds backed by the special assessment revenues. The Phase 1 rate is currently $.22 per $100 of assessed value and may increase if required to support the financing plan during the life of the bonds. State law allows for an increase in the tax rate up to a maximum of $.40 per $100 of assessed value. Fairfax County has formed a second special district to provide approximately $660 million in funding for Phase 2 of the Silver Line project.

Alexandria, Virginia

Potomac Yards

For purposes of funding a new Metrorail station, a multi-faceted value capture program was implemented. The City of Alexandria committed to enacting two special tax districts within the station area. This included: 1.) a special assessment of $0.20 per $100.00 of assessed value is to be levied on commercial properties within a higher density redevelopment district; and a lower density tax district based on a special assessment of $0.10 per $100.00.

Arlington County, Virginia

Crystal City, Pentagon City and Potomac Yard Tax Increment Financing District

In October 2010, the Arlington County Board established a tax increment financing (TIF) area in support of the Crystal City Sector Plan and infrastructure that will support Potomac Yard and Pentagon City. Crystal City, Potomac Yard, and Pentagon City serve as Arlington's largest commercial office, retail, and hotel district, providing housing for thousands of households. Funds will be used to support major infrastructure renewal projects, the realignment of streets and intersections into an urban street grid, the proposed Crystal City Streetcar Project, and an urban park.

The amount of the tax increment revenue is determined based on a baseline assessed value of all property in the area and in each subsequent year, tracking the incremental increase in assessed values relative to the base year, and segregating the incremental value in a separate fund. Each year the County board approves the tax rate and the percentage of funds that will be allocated to the TIF as opposed to the County's general fund.

Chapter 7
The Path Forward

The CSX East-West Corridor provides a tremendous local and regional economic development opportunity. The corridor and surrounding communities stand to gain considerable development following transit investment. The key is to plan for it in order to be ready to guide future growth when plans come forward.

As shown in Chapter 4, each of the four selected station areas have considerable physical capacity to support TOD. However, there are major challenges that need to be overcome to create a suitable environment and set the stage for TOD investment by developers.

The following short-term steps will advance the TOD planning process:

- More in-depth detailed analysis to determine the current "capacity" for TOD:
  - Physical Suitability
  - Local Leadership
  - Public Sector Readiness
  - Developer Interest
- Community engagement
- Local and interjurisdictional land use planning
- Rezoning
- Market analysis
- Private developer outreach
- Local Stewardship
- Identify a Champion

In addition to TOD Planning, there must be a carefully coordinated TOD implementation strategy to carry out the full vision. This approach must include proactive outreach to and engagement of local stakeholders, considerable public and private investment, major regulatory reform, and comprehensive land use and transportation planning.

One of the key challenges to successful redevelopment of the station areas is ensuring that redevelopment occurs as part of a larger vision. Thinking broadly about TOD while taking a thoughtful approach to the phasing of individual improvements within each station area will help ensure that the "pearls on the necklace" operate as a system, are interdependent, and become vibrant, distinctive, and vital attractions in the region.

Recommendations

In-Depth Analysis

This study has conducted preliminary analyses of station area land uses demographics and redevelopment potential. In order to advance the study, more analysis is needed to ensure the project is successfully implemented.

A Physical Suitability Analysis will look at the station areas and assess them in relation to their surroundings. Evaluating potential positive development drivers, such as the site's distance from recreation facilities, and urban amenities, while also considering potential negative drivers, including pollution generators and hazardous areas, are all evaluated. Other aspects of a Suitability Analysis include more technical elements, including soil quality, and economic and social elements.

Successful TOD on the Dolphin Rail Corrido will require a prepared public sector. While conversations with the Cities of Sweetwater and Doral during this study indicate that the public sector will welcome this infusion of transit and physical investment, the municipalities and County must take actionable steps to enable this vision to become reality.

Local Leadership from elected officials and community leaders is a critical component to ensure public sector readiness. For instance, the municipalities should establish a regulatory framework that enables and encourages developer interest to build this vision. Changes to Zoning Codes are detailed later in this chapter. Moreover it is essential that local leadership take a proactive approach to shifting urban development from current suburban typologies. If urban densification is to come to the CSX East-West Corridor, then multimodal transportation must be prioritized. Expanding existing bicycle lanes and sidewalk infrastructure along with a dedication to frequent municipal transit circulators will help to ensure successful TOD districts.

As this effort advances, public input and community engagement will be necessary. Local civic groups, neighborhood associations, and chambers of commerce should be identified at this early stage to ensure the project has advocates from throughout local business and residential communities.

Previous chapters have discussed how multiple jurisdictions are involved in the CSX East-West Corridor. Each station area will require coordination with more than one governmental entity. Of particular note, while the NW 107th Avenue Station falls within Sweetwater's municipal limits, the greater station area is also shared with Doral, and Unincorporated Miami-Dade County. Interjurisdictional coordination between these entities well help ensure a holistic approach to land use planning.

The success of private developer outreach will set the tone for this project's implementation. Much of the land envisioned as TOD in this study is privately held, thus this vision can only be fully realized with developer buy-in. For example, the vision for NW 107th Avenue proposes a significant reimaginagion of International Mall. It proposes a shift of the mall's form from a traditional design in to a street-oriented vibrant shopping district. This concept can only come to fruition with continuous developer outreach.

If the CSX East-West Corridor is to become reality, it will require the identification of a champion. A rail operator should be identified – an entity that can ensure that the tasks detailed in this chapter are advanced. The CSX East-West Corridor's success as a transit corridor will be defined by its ridership. The visions created in this study were developed with maximizing ridership as a key objective. Just as development will depend on regular and frequent ridership, ridership will be dictated by the existence of accessible attractions on the corridor. CSX East-West Corridor's operator is a logical champion to ensure that the synthesis of transit and TOD are interlinked from the beginning.

Rezoning

Each site along the CSX East-West Corridor has a their own geographic and regulatory context which present unique challenges to development, but one challenge they all share is incomplete zoning. Traditional Euclidian zoning has limited the creation of vibrant mixed-use districts, while Form-based zoning has progressively gained momentum all across the country. Miami was the first major city to adopt a form based code in 2010 with the implementation of Miami 21. Recently, Miami-Dade County has followed suit through the adoption of their own Form Based Code to Regulate Urban Centers in 2015.

It is the recommendation of this report that form-based mixed-use districts are created around all four TOD station sites to enable diverse, cohesive, dense development to occur which enriches and is enriched by the CSX East-West Corridor.

Sweetwater Recommendations

In Sweetwater the NW 107th Avenue station is envisioned as a major destination, and given the adjacent shopping malls it may be prudent to name the zoning category the "Downtown Sweetwater Mixed-Use District". This District could be based on Sweetwater's existing University City Mixed-Use District, but would require a number of modifications such as new FAR, height, parking and density regulations customized to the specifics of this site. Other modifications include expanding the number of permitted retail and service establishments, and a coupling of setback requirement elimination coupled with the addition of build-to lines to create continuous storefront facades.

Doral Recommendations

In Doral, the new Transit Oriented Mixed-Use District could be based on the existing Downtown Mixed-Use District, but it would be best served by an increase in maximum residential density, height, and FAR, and reduced parking requirements. This district should also be applied to the east side of NW 107th Avenue, directly adjacent to the Sweetwater station site. About half of the development envisioned in the NW 107th Avenue TOD Concept, most notably the International Mall, is within Doral rather than Sweetwater where the station itself would be located.

Miami-Dade County Recommendations

The two sites located in Unincorporated Miami-Dade County have lower development intensity envisioned than the sites in Doral and Sweetwater. Nevertheless, both could benefit from the creation of new Urban Center Districts as created in the Standard Urban Centers District Regulations.

The Dolphin Station Urban Center District must deal with a severe space restriction due to the on/off ramps between HEFT and SR 836, and therefore the efficient handling of space is likely the most important factor in determining the success of TOD around Dolphin Station. Minimized restrictions on building orientation, open space requirements, and setbacks would all support a dense district.

The NW 137th Avenue Station could be built as envisioned without an Urban Center district, but eventual opportunities for development of the area within the UDB to the south and west of the station could benefit from the establishment of a Dolphin Terminus Urban Center District. This designation would preserve and in fact maximize this potential on the >50 acres between the UDB and SR 836 on/off ramps.

A constant theme in the station site visions was the continuation of the Kitty Roedel trail throughout the study area. It is recommended that local stakeholders coordinate with the cycling community and the Miami-Dade County Parks, Recreation and Open Spaces Department to ensure that the trail meets the recreational and commuting needs for walkers and cyclists alike.

WSP | Parsons Brickerhoff
7650 Corporate Center Drive
Suite 300
Miami, FL 33126
WSP-PB.com/usa