

# PURPOSE & NEED, CONTEXT & EVALUATION PLAN

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Prepared for:  
City of Tampa

Prepared by:  
HDR with Kimley-Horn,  
and B2 Communications

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# Purpose & Need, Context & Evaluation Plan

## 1. INTRODUCTION

### 1.1 Report Contents

The City of Tampa is conducting the InVision: Tampa Streetcar Feasibility Study (Streetcar Feasibility Study) to evaluate the potential modernization and extension of the Tampa Historic Streetcar system to better serve the mobility needs of residents, workers, visitors, and students in the Downtown Core, Ybor City, the Channel District, and surrounding urban neighborhoods. The planning effort is designed to advance mobility goals and strategies presented in the *InVision: Tampa Center City Plan* from 2012 and build on previous studies assessing transportation needs for the Center City.

This report presents the purpose and need statement for the project; provides a summary of existing land use, development, and mobility conditions in the study area; and outlines strategies for the evaluation of extension options. The first part of the report reviews the purpose and need for the existing system's modernization and extension. This section explores issues associated with the rapid pace of Center City development and related changes in travel demand and accessibility. The purpose and need statements are organized around the following interrelated objective statements:

- » Connect Downtown Districts;
- » Serve Diverse Travel Markets;
- » Improve First/ Last Mile Service;
- » Support Economic Development; and
- » Expand Sustainable Transportation Options.

The second part of the report provides a summary of demographics regarding transit supportive and transit dependent populations; an overview of existing and future land use; details on major destinations and venues within the

study area; a summary of master planned developments and recent and under construction development activity; and an overview of transportation considerations including reviews of existing transit service, capacity concerns, and other mobility issues.

The final part of the report includes an evaluation plan, which outlines methods that will be used to assess alignment performance relative to the purpose and need statements as well as assess ridership, cost, and constructability.

### 1.2 Study Overview

The purpose of the Streetcar Feasibility Study is to define and evaluate the modernization options for the existing streetcar system and facilities, assess the potential for an extension of the system, and evaluate vehicle technology alternatives to improve ridership, operations, cost effectiveness, and overall quality of service. The City is conducting the study in partnership with other agencies including the Florida Department of Transportation (FDOT) and Hillsborough Area Regional Transit Authority (HART) and in coordination with other regional transit initiatives that are underway, such as the HART *Regional Transit Feasibility Plan*. The study will proceed under two distinct phases of work as described below.

#### PHASE 1: CONCEPT DEVELOPMENT AND FEASIBILITY ANALYSIS

The goal of Phase 1 is to define the project, identify alignment options, estimate preliminary capital and operating/maintenance costs, develop a preliminary financial plan, and to submit a request for entry into project development under the Federal Transit Administration (FTA) Small Starts program. Phase 1 includes a significant program of public engagement to ensure residents and stakeholders have opportunities to participate in the process of defining and evaluating modernization and extension concepts. During Phase 1, the project's purpose and need will be developed and

alignment options will be defined and evaluated using a set of measures that relate to the Purpose and Need and performance and potential impacts. Preliminary costs and ridership estimates will be established and an initial evaluation of impacts will be completed to support the selection of a preferred alignment option. It is anticipated that the proposed streetcar extension project would likely undergo the Small Starts review process for funding under the FTA Capital Investment Grant (CIG) program. The Phase 1 work program and engagement process is designed to define a highly competitive project that can satisfy the CIG project justification requirements.

## PHASE 2: PROJECT DEVELOPMENT

During Phase 2 of the study, the City will refine the preferred alignment option and more detailed plans for extension and modernization will be prepared. This effort will include:

- » an evaluation of alternative vehicle technologies;
- » development of guideway, station design, and modernization concepts;
- » preparation of updated ridership projections and capital and operating cost estimates;
- » completion of environmental review and documentation; and
- » development of funding and financing plans.

Phase 2 activities are focused towards refining the preferred alignment and preparing documentation to support requests for funding from local, state, or federal sources.

## 1.3 Study Area

The project study area is based on the area defined for the *InVision: Tampa Center City Plan* with the exception that it is focused more closely on the Downtown Core and the existing streetcar service area. As shown on Figure 1, the Streetcar Feasibility Study area measures approximately three-miles by two-miles centered on the Downtown Core with East Columbus Drive to the north, North 27<sup>th</sup> Street and Ybor Channel to the east; Platt Street, Garrison Channel, and Adamo Drive to the south, and South/North Howard Avenue to the west. This area spans the following urban districts and neighborhoods:

- » Tampa Heights
- » Central Park/Encore!
- » Ybor City
- » Channel District
- » Downtown Core/Central Business District
- » University of Tampa/Grand Central
- » North Hyde Park
- » West River

Figure 1. InVision: Tampa Streetcar Feasibility Study Area



## 2. PURPOSE AND NEED

The project purpose and need statements below explore issues associated with the rapid pace of Center City development and related changes in travel demand and accessibility. The purpose and need statements, organized around the following interrelated objective statements, serve as the basis for defining and evaluating modernization and alignment options for the Tampa Historic Streetcar system:

- » Connect Downtown Districts
- » Serve Diverse Travel Markets
- » Improve First/ Last Mile Service
- » Support Economic Development
- » Expand Sustainable Transportation Options

Further background information regarding the project's transportation and land use conditions addressed in this section of the report are provided in subsequent sections.

### CONNECT DOWNTOWN DISTRICTS

Tampa's Center City is undergoing a dramatic transformation. By 2020, the Downtown Core, Channel District, and north Harbour Island will be home to nearly 10,000 residents and another 40,000 people are projected to reside in surrounding districts, including Central Park, Ybor City, North Hyde Park, Grand Central, and Tampa Heights. The number of employees in the Center City and surrounding districts is expected to increase to around 100,000 by 2020. Over the following 20 years, these areas are expected to gain an additional 34,000 employees and 30,000 residents. Total population and employment is projected to reach 220,000, an increase of 42 percent between 2020 and 2040.

The City has also witnessed steady increases in the number of people attending conventions at the Tampa Convention Center; visiting museums, parks, and the Riverwalk; taking classes at University of Tampa, Hillsborough Community College Ybor Campus, and Stetson Law School; and attending

sporting, entertainment, and special events at the Straz Performing Arts Center, the Amalie Arena and smaller venues located throughout the Center City. Clearly, the community's vision for an urban, mixed use, transit-supportive destination as expressed in the *InVision: Tampa Center City Plan* is moving toward realization.

The Center City's competitiveness and livability will be directly influenced by the quality and capacity of connections between destinations in the Downtown Core and surrounding urban neighborhoods. The following factors will likely impact connectivity and mobility:

- » Destinations in the core and surrounding neighborhoods are dispersed across a six-square-mile area, with approximately three miles separating the west and east ends of the study area.
- » Concentrations of transit-supportive residential development on Harbour Island and in Ybor City, the Channel District, North Hyde Park, and West Tampa are beyond a reasonable walking distance to employment-intensive areas, public facilities, and cultural and entertainment destinations in the Downtown Core.
- » The I-275, I-4, and Selmon Expressway viaducts and ramps as well as the CSX rail corridors and spurs create gaps in the urban fabric, affecting the quality of connections between the Downtown Core and surrounding urban districts.
- » The Hillsborough River, Garrison Channel, and Ybor Channel, although important amenities, present physical barriers separating destinations and restricting connectivity.

Given these spatial and physical conditions, existing travel within and between Center City districts and surrounding neighborhoods is time-consuming and inconvenient. Single occupancy vehicle travel will become increasingly difficult as population and employment increases over the next 20 years. As new construction displaces surface parking lots, the availability of short term parking will diminish and parking costs will likely increase. Distance and physical barriers make walking an unattractive option for all but very short trips, particularly during hot weather. And although the existing streetcar does connect some key Center City destinations and other modes offer additional options, the capacity of these to provide effective service

across a broader area of the Center City is restricted. More convenient and consistent means of access and circulation between the Downtown Core and a broad cross section of urban neighborhoods and destinations is required to ensure the Center City's long term success.

### SERVE DIVERSE TRAVEL MARKETS

As the City of Tampa's and Hillsborough County's traditional center of employment, governmental services, culture and history, and entertainment, Center City destinations draw a broad range of users from across the region. The Center City is increasingly chosen as a desirable location to live for a diverse resident population ranging from young professionals and empty nesters, affluent empty-nesters, and long-time residents (many of whom are transit-dependent) in existing and revitalizing neighborhoods surrounding the Downtown Core. Residents, workers, and frequent visitors travel to and within the Center City to conduct business, access public services, participate in educational programs, and enjoy sports, cultural, and entertainment events. These users place a strong and consistent demand on existing transportation, transit, and parking resources. And as these numbers increase—population and employment alone are projected to increase by 65,000 in the study area between 2020 and 2040—existing facilities will come under increasing stress.

The introduction of a high capacity, reliable, and consistent circulator service could meet increased demands while also more efficiently using existing roadway capacity and street space. Such a service could help serve the demand of transit-dependent populations in downtown-adjacent neighborhoods as well as meet the needs of Center City's growing residential population, event and venue patrons, conventioners, and workers.

### IMPROVE FIRST/ LAST MILE SERVICE

As a major center of regional activity, the Center City is served by several regional parking garages and transportation hubs, including the HART Marion Transit Center and Transitway, Union Station, the Greyhound Bus Station, the regional water ferry stop at the Convention Center, and other large public garages in the Downtown Core and Ybor City. These regional hubs and parking resources, serving car commuters, commuter and express bus services, County-wide bus routes, private regional bus operators, Amtrak

service, and the water ferry (seasonal service only), are generally located at the periphery of the Downtown Core and poorly connected to final destinations distributed throughout the Center City. Although services and resources cater to a wide range of users and geographical reaches, there is no unifying service that meets the demand of daily regional transit commuters and other regional travelers seeking seamless, local first/ last mile service. An intermediate-capacity, scheduled service that provides frequent and efficient service to and from regional transit hubs and parking is missing in the service area.

Although a number of mobility options have been introduced in recent years, none provide sufficient capacity or levels of service to meet first/last mile demands. Bike Share offers a casual, on-demand option for visitors and an accelerated option for residents. But while bicycle hubs are widely available through the study area (and beyond), bike share is not a practical option in some instances and serves a specific travel market. The Downtowner offers free, on-demand rides to groups of up to 5 people in open-air, electric vehicles. The Downtowner is an efficient option in off-peak conditions, but during peak-conditions or before and after events, when large numbers of people are using transit at the same time, the wait times are long due to the low number of vehicles in service. HART's HyperLINK rideshare service and a Connected Vehicle Pilot Deployment Program are local-service transit options that are planned or being considered for the future that face the same challenges related to specific travel markets and travel purpose.

Services using larger capacity transit vehicles currently operating in the study area provide circulator-type services for visitors to the Downtown Core and Ybor City. The HART In-Towner is a free trolley bus with limited service to the Downtown Core, Channel District, and Harbour Island. The existing streetcar largely operates between Ybor City and south of the Channel District, independent of regional travel, with few connecting stops and no service to the Marion Transit Center.

To close the mobility gap for regional travelers, a service which complements existing public transit by improving connections to HART bus routes, existing regional transit hubs, regional parking resources, and service to potential regional transit hubs is needed. A circulator service serving first/last mile

travel could also serve as the first phase of service connecting to subregional destinations like Westshore, Seminole Heights, and the University of South Florida (USF).

## SUPPORT ECONOMIC DEVELOPMENT

Investment in large-scale, multi-block, mixed use projects in the Waterfront District, The Heights, West River, and Port Tampa Bay will have a dramatic impact on the future of the City and region. These projects, representing several billion dollars of private investment, will reshape large sections of the Center City and surrounding neighborhoods. These projects, along with the continued revitalization of Ybor City, redevelopment and infill in North Hyde Park and Central Park, and the build out of plans for the Channel District and Encore, will create new travel demand in and between locations not currently well-served by convenient, high capacity transit and shared mobility services. Given the spatial and physical conditions outlined in A above, existing travel within and between the Center City district and these emerging development area is currently time-consuming and inconvenient.

A high capacity circulator service has the potential to support economic development objectives in the *InVision: Tampa Center City Plan* by linking new development areas to each other and to the Downtown Core, relieving pressure on existing parking resources, and allowing new residents to choose car-less and car-light lifestyles. A quality circulator service linking planned population and employment concentrations can help bridge the distances across the Center City, and connect adjacent subdistricts more directly to destinations, amenities, and events and activities focused in the Downtown Core.

## EXPAND SUSTAINABLE TRANSPORTATION OPTIONS

Center City areas are typically constrained by existing infrastructure and generally have limited space to accommodate increased traffic and parking demands. Tampa's Center City is no exception as existing transportation infrastructure can support a finite capacity based on the width of travel ways and available land for parking. Since travel ways are unable to be widened to add travel, we will need to meet existing and future development through additional mobility options. Transit and shared mobility solutions provide an option to increase the number of occupants per vehicle, and provide a network of services operating within the existing grid layout within the historic Downtown Core and adjacent Center City neighborhoods.

Growth is continuing to occur in and around the Center City. Tampa is one of 20 metropolitan areas in the country with the highest growth from 2010 to 2015 with further growth anticipated due to more employment opportunities. The new waterfront district and Port of Tampa developments are planned on the south and east side of the Downtown Core, and promote walkability, sustainability and healthy living with enhanced landscaping and public space. These and other developments will entice people to work in and around the Center City and thus result in increased travel demand on streets that can no longer be widened.

Existing transportation options are available in Center City with a majority involving single occupancy personal vehicles. Other mobility services exist and are emerging such as the HART's local, express, and In-Towner, the Downtowner, HART's autonomous vehicle pilot project and connected vehicle technology (in development); however, the existing and emerging services do not provide a desired core circulator service as a sustainable solution to link several popular destinations.

A service with the potential to serve internal trips effectively, bypass peak hour and event-related congestion, and leverage the presence of regional transition connections and parking resources is desired. Expanding sustainable transportation options is intended to be an attractive alternative to single-occupancy vehicles traveling from Center City origins to destinations, and vice versa.

### 3. CONTEXT

#### 3.1 Demographics

A spatial analysis of demographic data was completed to determine the geographic distribution of various population characteristics for the study area. Understanding where higher densities or concentrations of the potentially transit dependent or transit supportive populations are located will help identify tracts, neighborhoods, or corridors that could support an expanded streetcar service. This analysis does not necessarily determine where additional transit service should go, but rather where additional transit service could be more successful based on geospatial insights.

Data utilized includes the Hillsborough County Metropolitan Planning Organization (MPO) regional planning model population and employment projection data, U.S. Census Bureau 2010 Census Block-level data, and U.S. Census Bureau 2015 American Community Survey (ACS) Block Group-level data.

Two different types of demographic analyses were completed: a population and employment analysis and a transit dependent populations analysis.

#### POPULATION, EMPLOYMENT & TRANSIT SUPPORTIVE LAND USES

Population and employment estimates can be used to indicate if the existing and projected activity densities of an area are supportive of transit service. Using the population and employment estimates and projections from Hillsborough County MPO's Tampa Bay Regional Planning Model (TBRPM), the study team evaluated the existing and future number of residents and workers in the study area.

In 2020, the study area is anticipated to have approximately 53,900 residents and 101,000 employees. By 2040, the anticipated number of residents will grow to 83,600 and the number of employees within the study area will grow to 135,300.

Table 1. Population & Employment Summary, 2020 and 2040

	2020	2040	Change (2020-2040)	% Change (2020-2040)
Population	52,923	83,613	30,690	58%
Employment	101,056	135,345	34,289	34%
Total	153,979	218,958	64,979	42%

Source: TBRPM

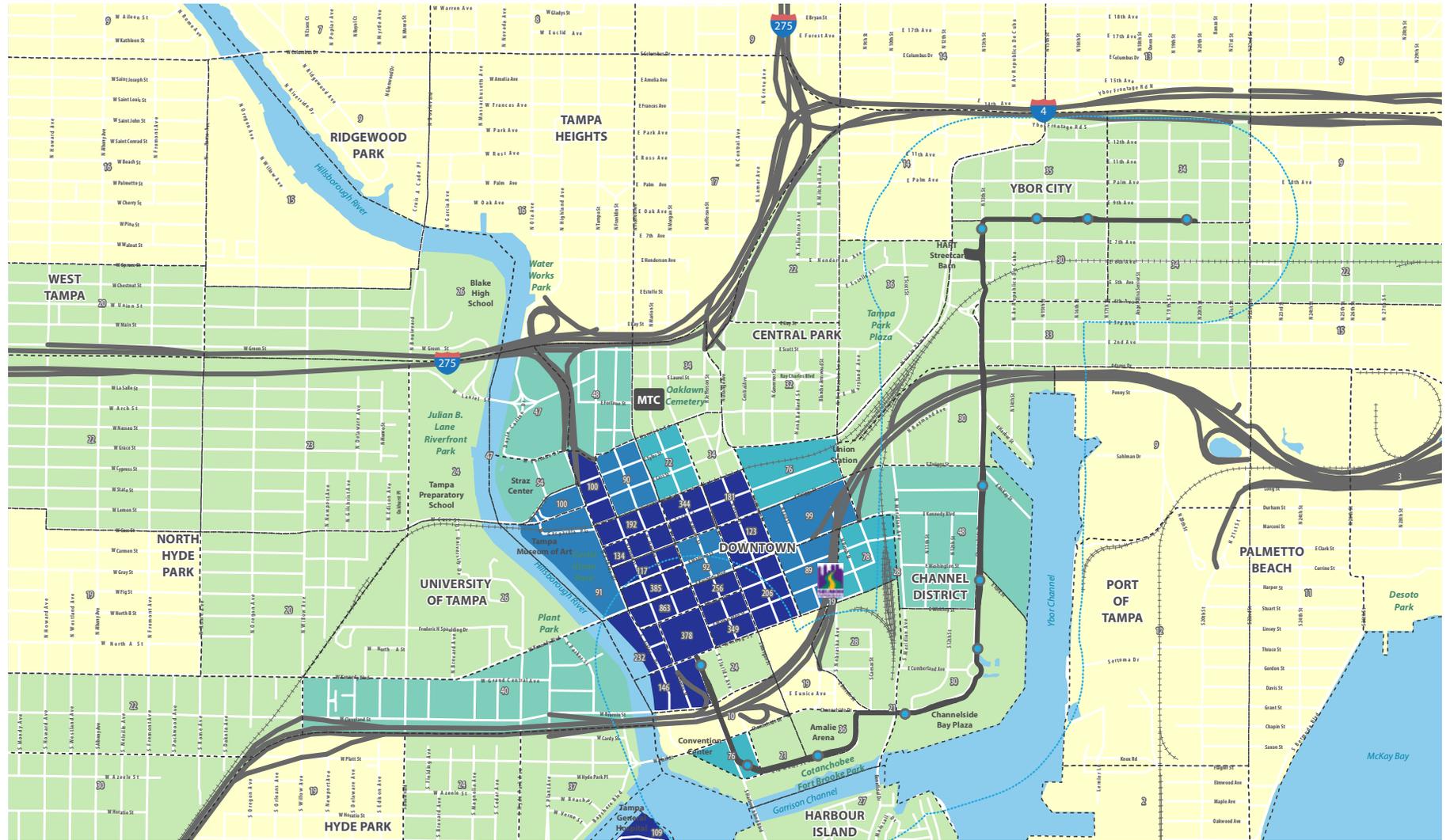
These population and employment estimates were used to calculate an activity density for each of the traffic analysis zones (TAZ) within the study area. A TAZ is the smallest geographic area for which population and employment projections are available. For each TAZ, the total employment and population numbers were divided by the area (acres).

The activity density of an area (population + employment per acre) relates to higher levels of development intensity (mixed use or commercial floor area ratio or FAR) and density (dwelling units (du) per acre). Area's with lower activity densities (less than 20 residents or employees per acre) can typically only support less frequent transit, such as local bus services with lower levels of service. As an area's activity density increases, it indicates that the demographics can support more frequent transit service, such as bus-rapid transit (BRT), light-rail, or commuter rail and higher levels of service for local bus service.

As shown in Figure 2, the activity densities in the study area are presented in ranges to reflect the variety of findings regarding the relationship between development intensities and the provision of sustainable, cost-effective transit service. Higher densities/intensities (greater than 40 residents or employees per acre) relate to higher levels of transit service that could be supported.

The center of the study area including the Central Business District (CBD) are expected to have the highest activity densities in 2020. The area generally between Polk Street, Jefferson Street, Ashley Drive, and Whiting Street has the highest activity density at over 100 residents or employees per acre.

Figure 2. Activity Density 2020



**Activity Density 2020**  
 InVision: Tampa Streetcar | City of Tampa

-  Existing Streetcar Stop
-  Existing Streetcar
-  Streetcar 1/4 mile buffer
-  Railroad
-  0-20
-  20-40
-  40-60
-  60-80
-  80-100
-  100+

Source: TBRPM

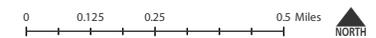
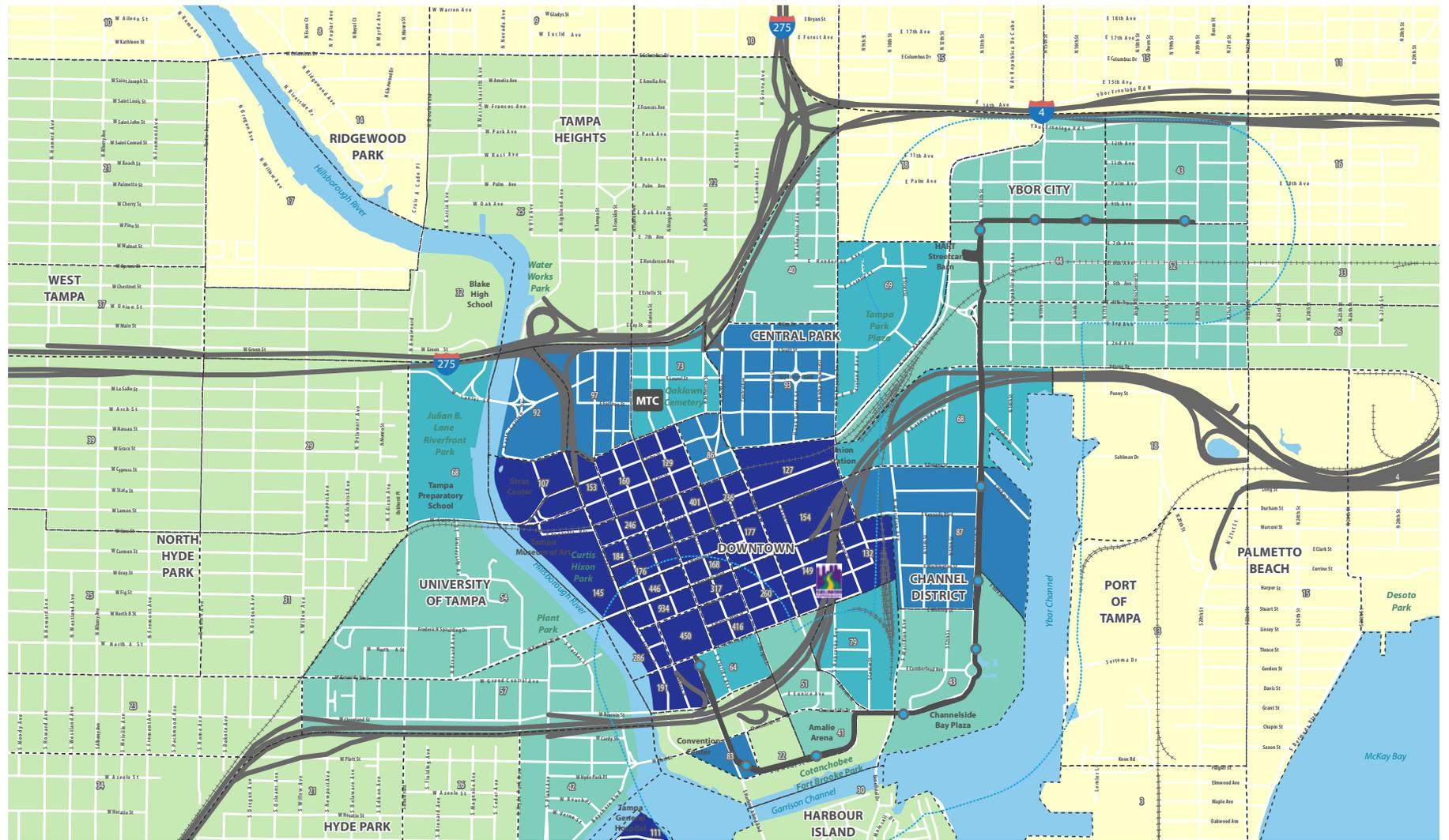


Figure 3. Activity Density 2040

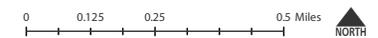


**Activity Density 2040**  
 InVision: Tampa Streetcar | City of Tampa

-  Existing Streetcar Stop
-  Existing Streetcar
-  Railroad
-  Activity Density 2040 (pop & emp/acre) 0-20
-  Activity Density 2040 (pop & emp/acre) 20-40
-  Activity Density 2040 (pop & emp/acre) 40-60
-  Activity Density 2040 (pop & emp/acre) 60-80
-  Activity Density 2040 (pop & emp/acre) 80-100
-  Activity Density 2040 (pop & emp/acre) 100+

 Streetcar 1/4 mile buffer

Source: TBRPM



Some TAZs have extremely high activity densities, including the TAZ that includes the Bank of America building, the Fifth Third Bank building, and City of Tampa offices (863 residents/employees per acre). These activity densities indicate that the majority of the study area is currently transit supportive (over 20 persons or jobs per acre).

As shown in Figure 3, activity densities and transit supportive populations within the study area are expected to significantly increase by 2040. A much larger area of the CBD is anticipated to reach densities over 100 residents or employees per acre. All of the surrounding areas including Ybor City, Channel District, West Tampa, North Hyde Park, Tampa Heights, and Hyde Park are also expected to have increased activity density by 2040.

### TRANSIT DEPENDENT POPULATIONS ANALYSIS

In addition to serving dense populations of residents and employees, successful public transportation serves the transit dependent populations by providing daily mobility options for their travel needs to work, school, shopping destinations, medical facilities, and recreational areas. The Streetcar Feasibility Study area was evaluated to identify areas with higher concentrations of people who could benefit from and support having improved transit accessibility, including:

- » Low-income households;
- » Unemployed individuals;
- » Younger and older individuals;
- » Minorities;
- » Renters;
- » Households with one or no vehicles; and
- » Individuals that commute using transit.

### Household Income

Where transportation costs account for a substantial percent of annual income, lower income families typically rely more on public transportation for access to critical locations such as work, child care, health care, and school.

According to a February 2013 report by the Federal Transit Administration (FTA), individuals in the City of Tampa “spent 20–24 percent of the average household budget on transportation.” This is more pronounced in locations where typical travel distances and times in the region include longer commute times.

Median household incomes were analyzed to identify areas with greater concentrations of low income households as an indicator of potential transit dependency. In 2015, median household income for Census Block Groups near North Hyde Park, Tampa Heights, and East Tampa neighborhoods were less than \$30,000 (see Figure 4). For comparison, the 2016 U.S. Federal Poverty Level for a family of five was \$28,780.

### Unemployment

Unemployment in itself does not determine transit dependence, since unemployment is often a temporary condition that does not affect the long-term travel modes of individuals. However, Census Block Groups with a greater percentage of unemployed persons may indicate a more fundamental characteristic of areas with greater number of transit dependent households. An analysis of the percentages of unemployed persons in 2015 illustrates that large, residential areas with high rates of unemployment coincide with the areas of low household income. As shown in Figure 5, these areas include Tampa Heights and Ybor City. New or expanded transit service to these neighborhoods could provide an additional commuter link to jobs within the central business district and in other regional centers served by transit.

### Age

Concentrations of persons younger than 18 or older than 65 may indicate transit supportive areas as well, since such groups are typically unable or have less access to use of a personal vehicle. Using Census Block data (2010 Census), six study zones were established to assess the concentrations of these two median age groups. Within the Streetcar Feasibility Study area, West River, Tampa Heights, and Ybor City are the study zones with the highest total potential transit dependency based on the number of residents younger than 18 or older than 65. West River has 42 percent of its population within these select age groups; nearly one-third of its residents are younger than 18 and approximately 1 out of 10 residents are older than 65. Tampa

Table 2. Population Under 18 and Over 65, 2010

Zone	Under 18	Over 65	Total Pop.	% of Pop. Under 18	% of Pop. Over 65	Total % Under 18 and Over 65
Channel District	56	30	1,316	4%	2%	7%
Downtown	206	224	2,946	7%	8%	15%
Tampa Heights	674	356	2,674	25%	13%	39%
UT/ Grand Central	179	316	5,026	4%	6%	10%
West River	2,008	519	6,004	33%	9%	42%
Ybor City	276	249	1,849	15%	13%	28%
<b>City of Tampa</b>	<b>80,071</b>	<b>38,078</b>	<b>352,062</b>	<b>23%</b>	<b>9%</b>	<b>32%</b>

Source: U.S. Census Bureau, 2010 Census

Heights has the second highest amount with 39 percent and Ybor City has the third highest at 28 percent of its total population under 18 and over 65 years old. Table 2 provides a summary of the population for these select age groups within the consolidated study zones.

Millennials (i.e., adults under the age of 35) are another potentially important transit supportive age group, based on their tendency to choose multimodal options for travel. Median age by Block (2010 Census) is presented in Figure 6. Populations with a median age of under 35 are distributed throughout the Center City with higher concentrations located around the University of Tampa. Census blocks with median age over 65 located around Ybor City and Tampa Heights are greater than the average for the City of Tampa.

### Race

Minorities, and particularly minority women, tend to be more dependent on public transportation than non-minorities. A preliminary analysis of the existing racial breakdown by Census Block Group (ACS 2015) is presented in Figure 7. Concentrations of minority populations reside west, northwest, north, and northeast of the CBD.

### Homeownership

Homeownership can also be a useful indicator of potentially transit supportive areas. Renters, which more typically include retirees, low-income households, students, and unemployed individuals, often represent populations who may regularly commute using public transit. Home ownership by Census Block Group (ACS 2015) is presented in Figure 8. Block Groups around the University of Tampa and north/northeast of the CBD have higher levels of renters.

### Vehicle Ownership

Many transit users are from households where one or more adults do not have access to a car. Vehicle ownership is an especially important factor in the City of Tampa, where transit commute times are long and walking and biking are not always practical options. The following discussion is from the *Hillsborough County Transportation Disadvantaged Service Plan 2016-2021*:

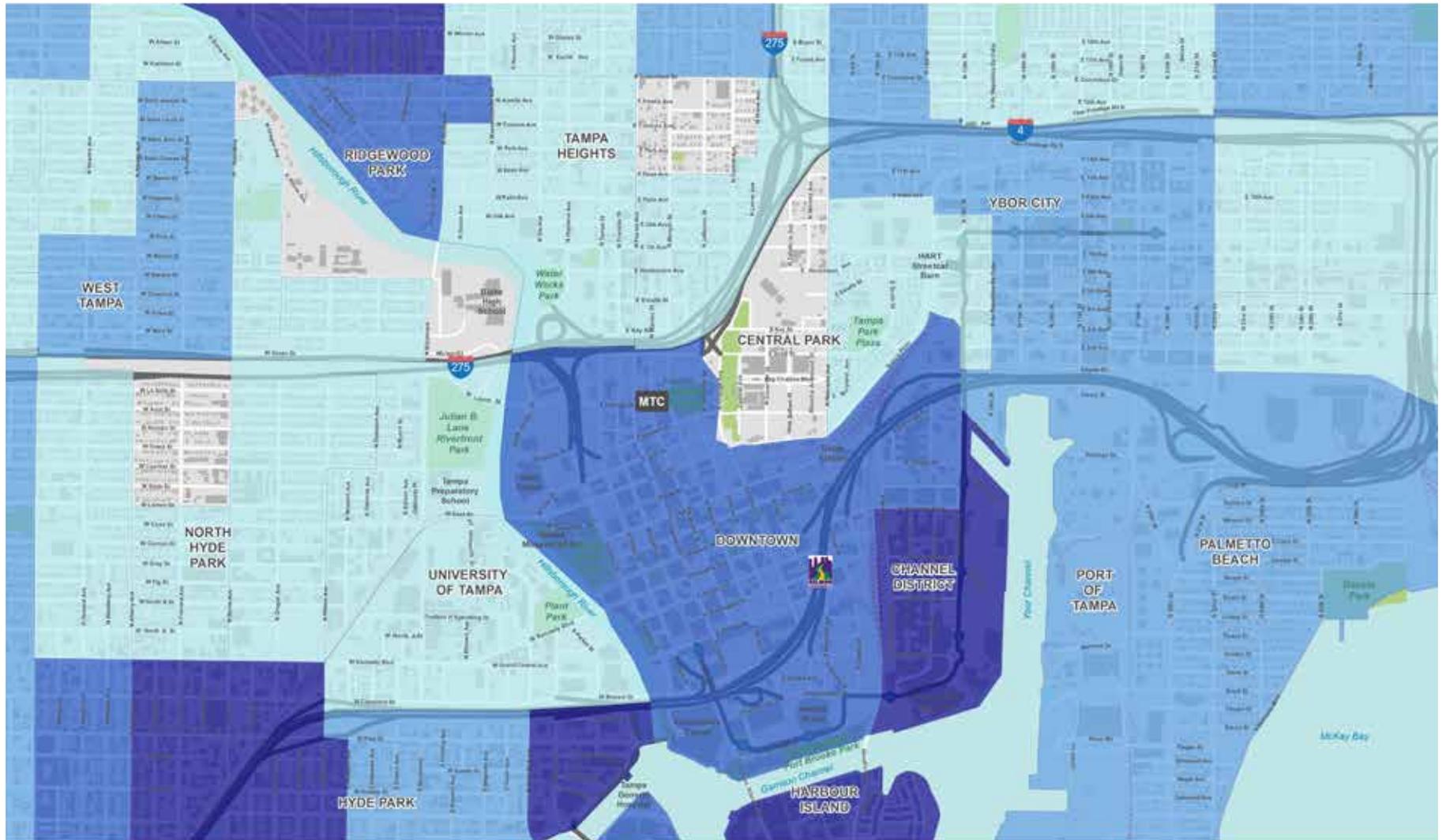
“The urban area is laid out on a grid; however, significant water features (e.g., Tampa Bay; Hillsborough Bay; and the Hillsborough, Alafia, and Little Manatee Rivers) restrict direct access routes to and from some destinations. [...] The historical patterns of suburban sprawl, high vehicle ownership, and low provision of public transportation have combined to create an environment in which not owning a vehicle is a serious barrier to shopping and accessing daily services.”

Vehicle ownership by household for Census Block Group (ACS 2015) is presented in Figure 9. Within the study area, populations with zero or one vehicle per household are concentrated near the areas of Seminole Heights, Central Park, Tampa Heights, and Ybor City.

### Means of Transportation to Work

The demographic analysis also included a breakdown of how people get to work. Populations that depend on transit for their daily commute include low-income and disabled individuals who rely on transit as a primary source of mobility for other trip purposes as well. Census Block Group (ACS 2015) reveal that a significant number of people in North Hyde Park, Seminole Heights, Central Park, and Ybor City depend on public transit for access to work (see Figure 10).

Figure 4. Median Household Income by Block Group, 2015



**Median Income by Block Group**  
 InVision: Tampa Streetcar | City of Tampa

 Existing Streetcar Stop	 Railroads	<b>Median Income by Block Group</b>	 \$50,001 - \$75,000
 Existing Streetcar	 Building Footprints	 \$0 - \$30,000	 > \$75,000
 Parks and Cemeteries	 \$30,001 - \$50,000		

Source: 2015 ACS



Figure 5. Percent Unemployed by Block Group, 2015

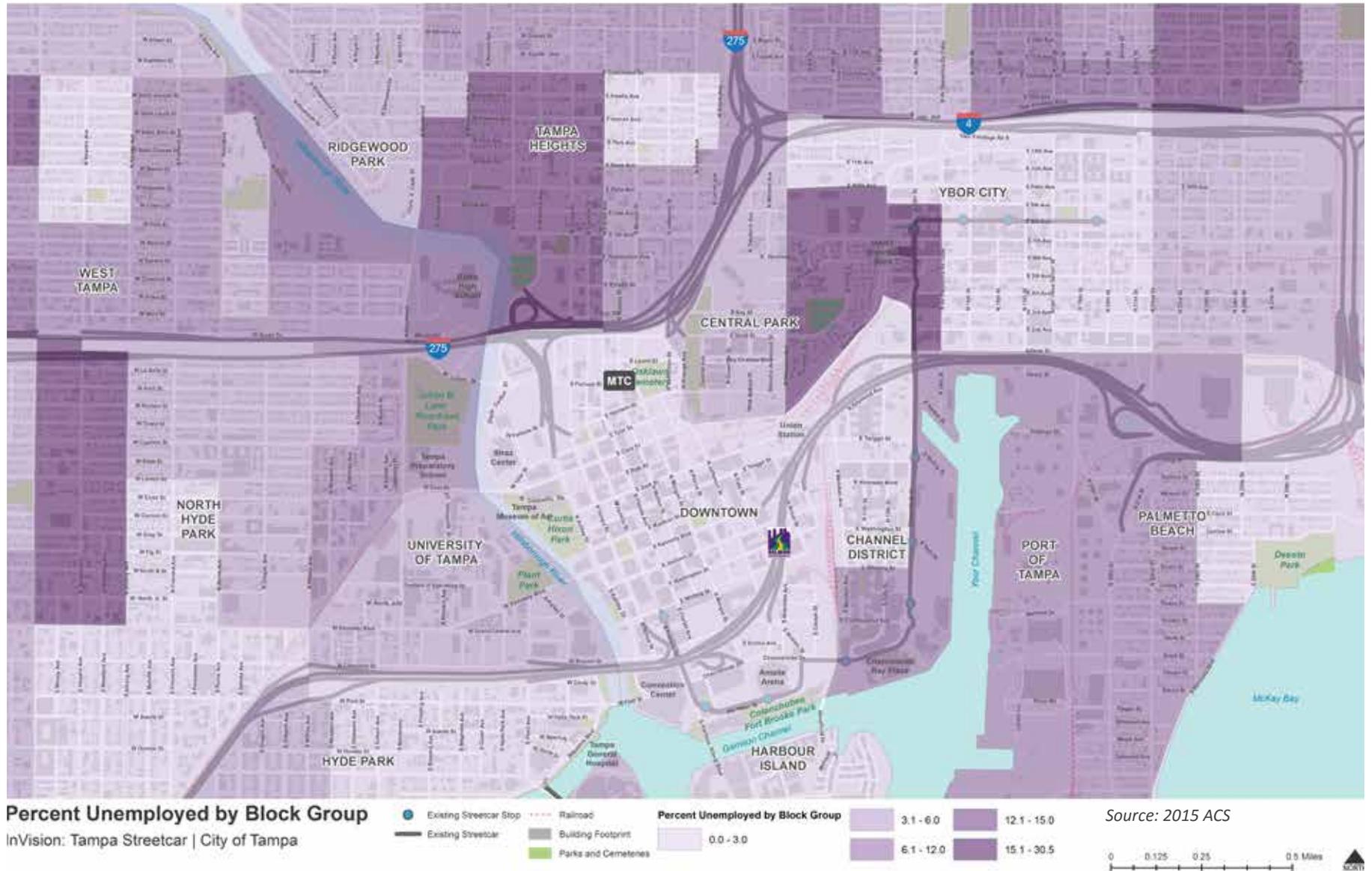
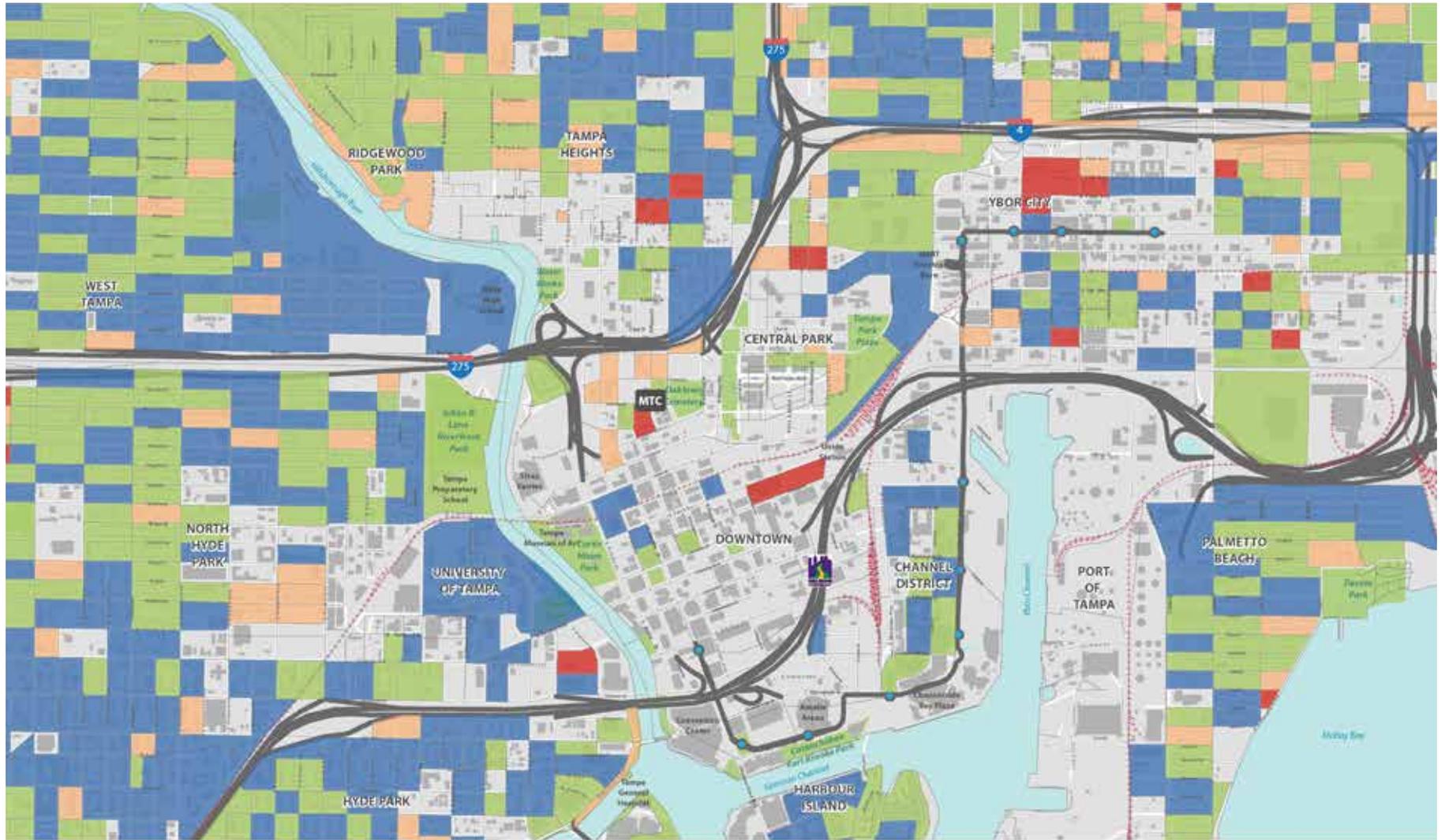


Figure 6. Median Age by Block, 2010



**HART Daily Boardings & Alightings**  
 InVision: Tampa Streetcar | City of Tampa

 Existing Streetcar Stop	 Railroad	<b>AGE Median Age by Block</b>	 51 - 65
 Existing Streetcar	 Building Footprint	 < 35	 > 65
 Parks and Cemeteries	 36 - 50	 Unknown	

Source: 2010 Census



Figure 7. Race by Block Group, 2015

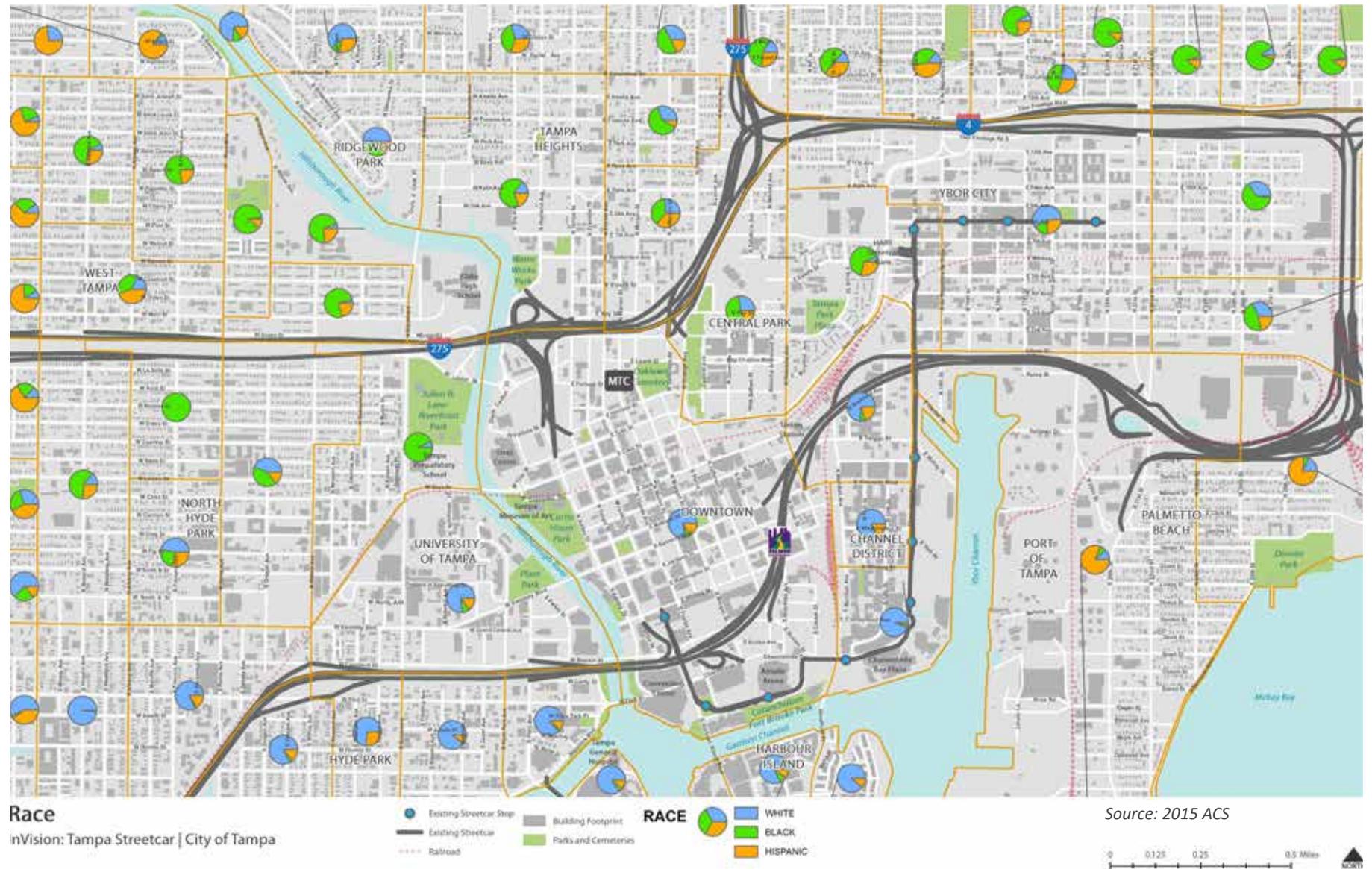


Figure 8. Home Ownership by Block Group, 2015

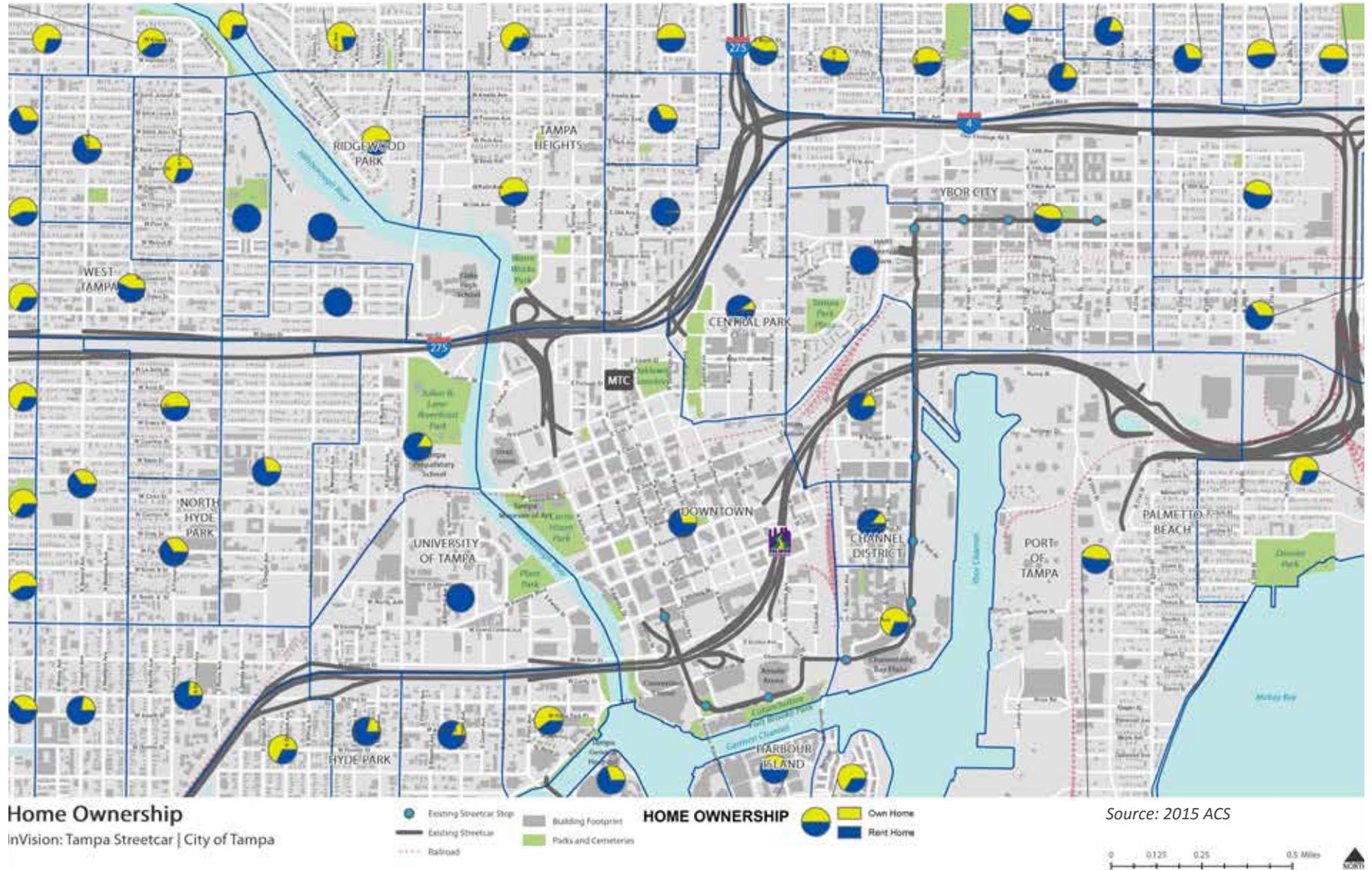


Figure 9. Vehicle Ownership by Household by Block Group, 2015

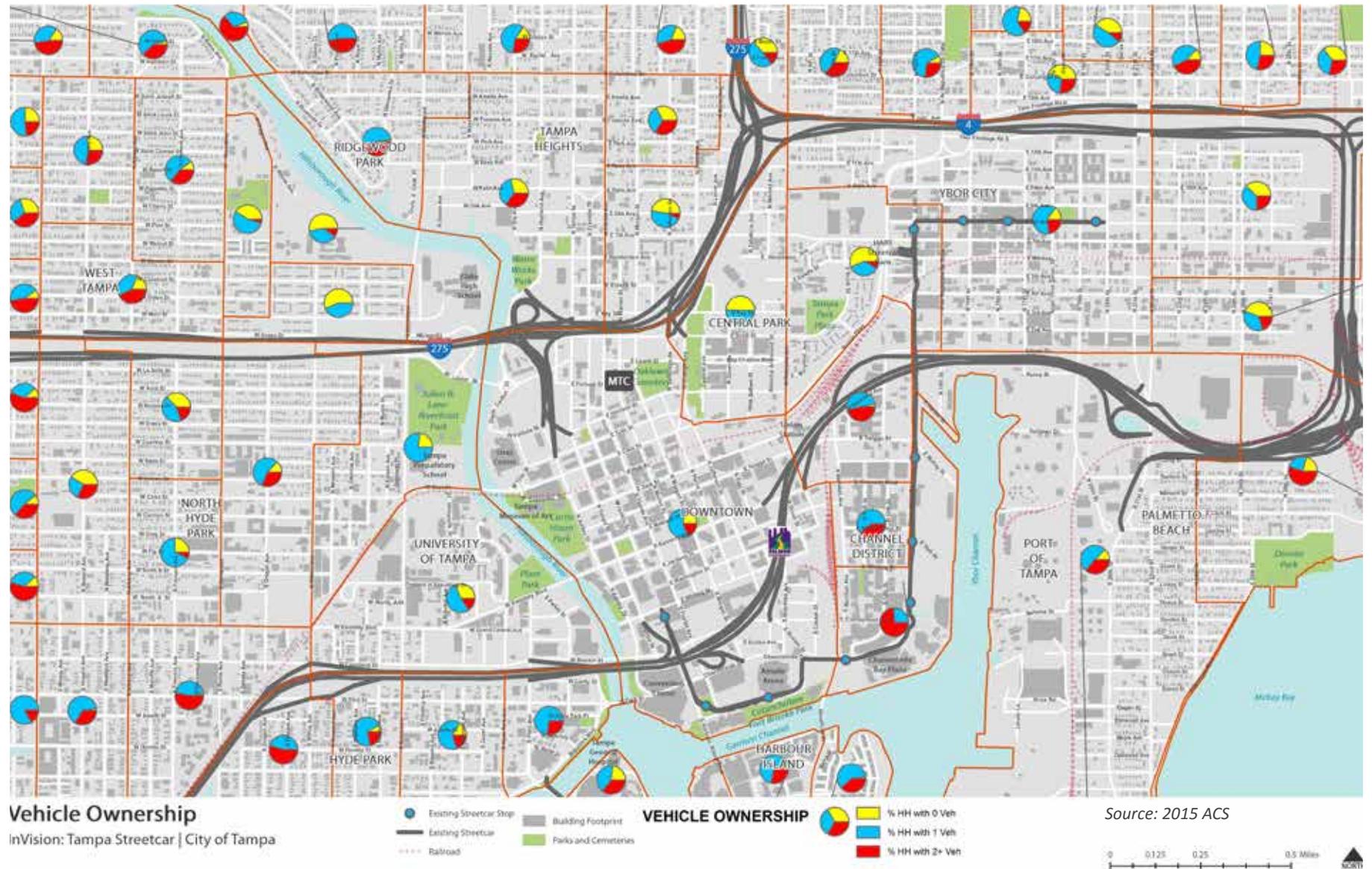
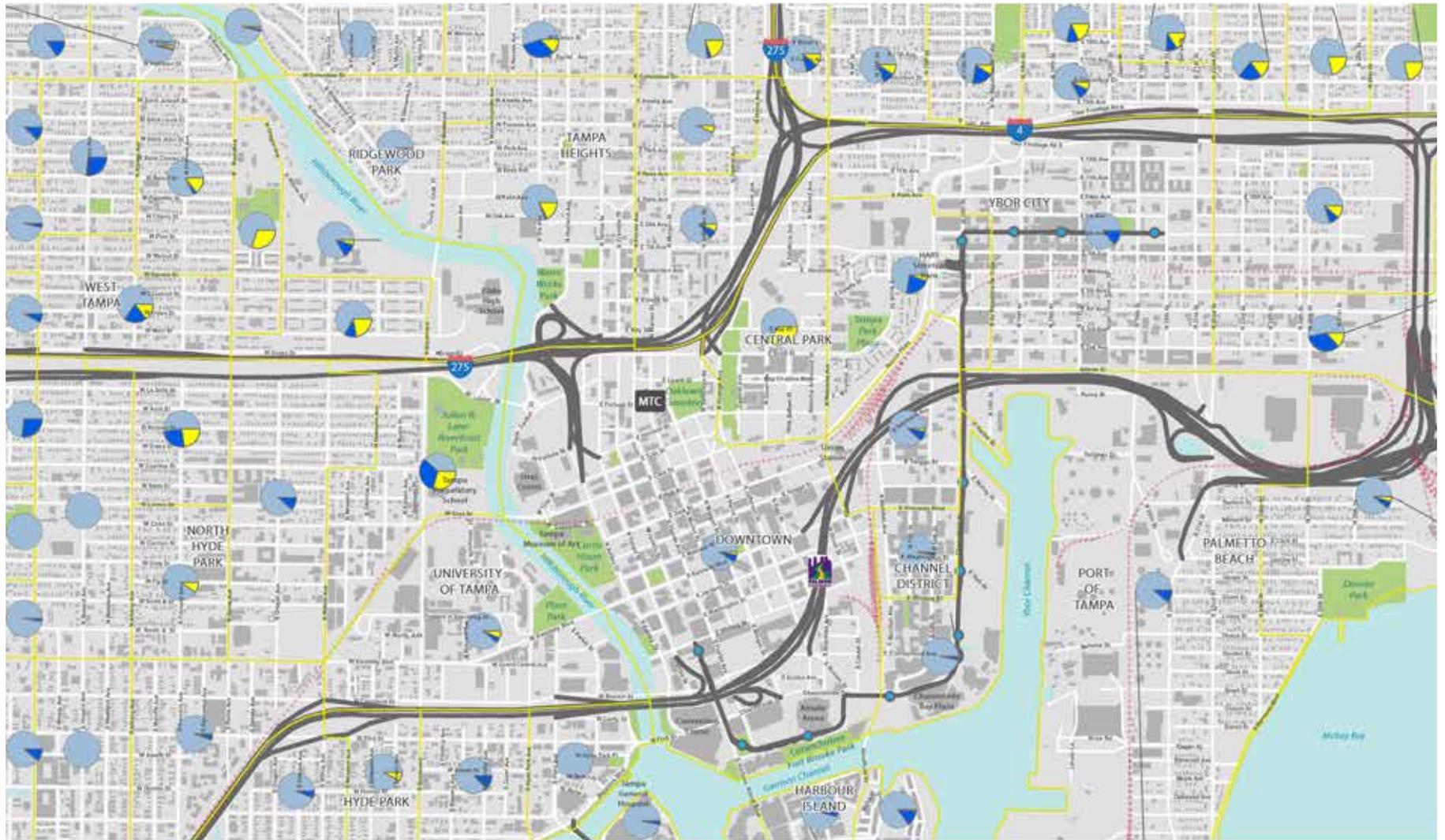


Figure 10. Means of Transportation to Work by Block Group, 2015



**Transportation to Work**  
 InVision: Tampa Streetcar | City of Tampa

-  Existing Streetcar Stop
-  Building Footprint
-  Existing Streetcar
-  Parks and Cemeteries
-  Railroad

**TRANSPORTATION TO WORK**

-  Drove Alone
-  Carpool
-  PublicTrans

Source: 2015 ACS



## 3.2 Land Use

The Streetcar Feasibility Study area is approximately 4,600 acres in size. The majority of the study area (nearly 70 percent, or 3,138 acres) is developed or undeveloped land. The remaining 1,438 acres of water includes the Hillsborough River, McKay Bay, Ybor Channel, and Garrison Channel. This section provides an overview of the existing land use and the future land use designations within the study area.

### EXISTING LAND USE

As shown in Table 3 and Figure 11, the majority of the 14,134 parcels in the study area is developed. One-third of land is public, institutional, utilities, or right-of-way. This includes 671 acres of public/quasi-public, or institutional uses such as municipal, county, and state government offices, hospitals, public parking, museums, sports facilities, cultural sites, public safety, non-profit social services, schools, higher educational institutions, libraries, judicial facilities, right-of-way, and easements. These uses are located throughout the study area, but are concentrated in the Downtown Core, along major highways such as I-275, I-4, and the Selmon Expressway, along Palm Avenue in Ybor City, Channelside Drive in Channel District, and Florida Avenue in Tampa Heights.

Twenty-eight percent of land is in primarily residential use (*note: mixed uses with commercial and residential uses combined are categorized under the predominant use*). This includes 582 acres of single-family residential uses that are located along the outer fringes of the study area and 214 acres of multi-family residential located in concentrated pockets in Channel District, Ybor City, North Hyde Park, Hyde Park, and Central Park.

Commercial uses make up 16 percent of the study area. Light commercial uses are concentrated in the Downtown Core and Ybor City and along commercial corridors including Kennedy Boulevard, Platt Street, Cleveland Street, Cass Street, Howard Avenue, Columbus Drive, Seventh Avenue, and Adamo Drive. Commercial parking is located throughout the CBD, Ybor City, and area south of the University of Tampa.

Industrial uses make up 12 percent of the area, including heavy industrial uses in the Port of Tampa on the eastern side of the Ybor Channel and some smaller light industrial uses in Channel District, along Adamo Drive and eastern portions of Ybor City, scattered sites in North Hyde Park and West Tampa.

The Center City area has about 100 acres of parks, cemeteries, or open space and four acres of agricultural lands. The parks include Julian B. Lane Riverfront Park, Perry Harvey Park, Tampa Park Plaza, Cotanchobee Fort Brooke Park, Desoto Park, Water Works Park. (*note: Curtis Hixon Park is categorized as public/quasi-public/institutional because it is on the same property as the Tampa Museum of Art, Children's Museum, and a public parking garage.*)

Approximately 250 acres of land within the study area are currently designated as vacant. This includes some sites currently under development including the USF Health Morsani College of Medicine and Heart Institute, a multi-family building site in the Encore! development, a multi-family building site in Ybor City, and The Heights development project.

Figure 11. Existing Land Use Map



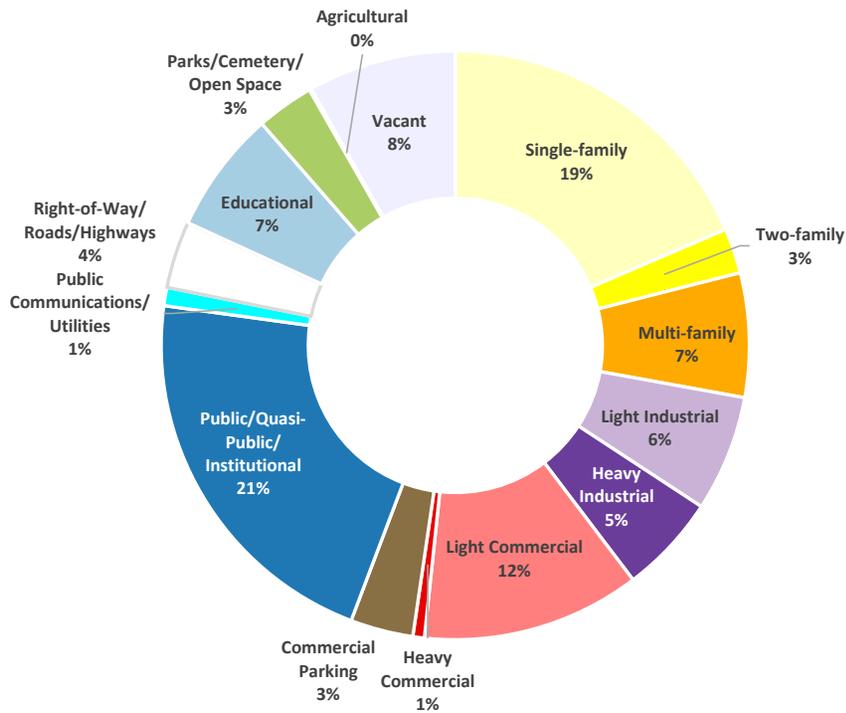
**Existing Land Use**  
 InVison: Tampa Streetcar | City of Tampa

Existing Streetcar Stop	Railroad	Single-Family	Light Industrial	Heavy Commercial	Communications/Utilities	Park/Cemetery/Open Space
Existing Streetcar	Private Parking	Two-Family	Heavy Industrial	Commercial Parking	Right-of-Way/Roads	Agricultural
Streetcar 1/4 mile buffer	Public Parking	Multi-Family	Light Commercial	Public/Institutional	Educational	Vacant

Source: Hillsborough County Property Appraiser, HDR



Figure 12. Study area Existing Land Use Summary Chart



Source: Hillsborough County Property Appraiser, HDR

Table 3. Study area Existing Land Use Summary

Existing Land Use	Parcels	Acres	% of Total
<b>Residential</b>	<b>9,426</b>	<b>874</b>	<b>28%</b>
Single-family	4,617	582	19%
Two-family	549	78	2%
Multi-family	4,260	214	7%
<b>Industrial</b>	<b>301</b>	<b>371</b>	<b>12%</b>
Light Industrial	237	200	6%
Heavy Industrial	64	171	5%
<b>Commercial</b>	<b>1,523</b>	<b>505</b>	<b>16%</b>
Light Commercial	1,158	377	12%
Heavy Commercial	70	20	1%
Commercial Parking	295	108	3%
<b>Public/Institutional/Utilities/ROW</b>	<b>1,412</b>	<b>1,030</b>	<b>33%</b>
Public/Quasi-Public/Institutional	1,219	671	21%
Public Communications/Utilities	29	31	1%
Right-of-Way/Roads/Highways	82	116	4%
Educational	82	211	7%
<b>Parks/Cemetery/Open Space</b>	<b>51</b>	<b>99</b>	<b>3%</b>
<b>Agricultural</b>	<b>3</b>	<b>4</b>	<b>&lt;1%</b>
<b>Vacant</b>	<b>1,418</b>	<b>256</b>	<b>8%</b>
<b>TOTAL</b>	<b>14,134</b>	<b>3,138</b>	<b>100%</b>

Source: Hillsborough County Property Appraiser, HDR

## FUTURE LAND USE

The City of Tampa adopted the *Imagine 2040: Tampa Comprehensive Plan* in January 2016. The plan includes future land use designations for the City, including the study area shown in Figure 14. Detailed descriptions of the future land use categories are provided in Table 4.

The majority of the land within the study area is designated as medium or high intensity/density mixed-use area. One-third of the land within the study area is designated as right-of-way including local roadways, limited access roadways such as I-275, I-4, and the Selmon Expressway, utility corridors, and railroad right-of-way.

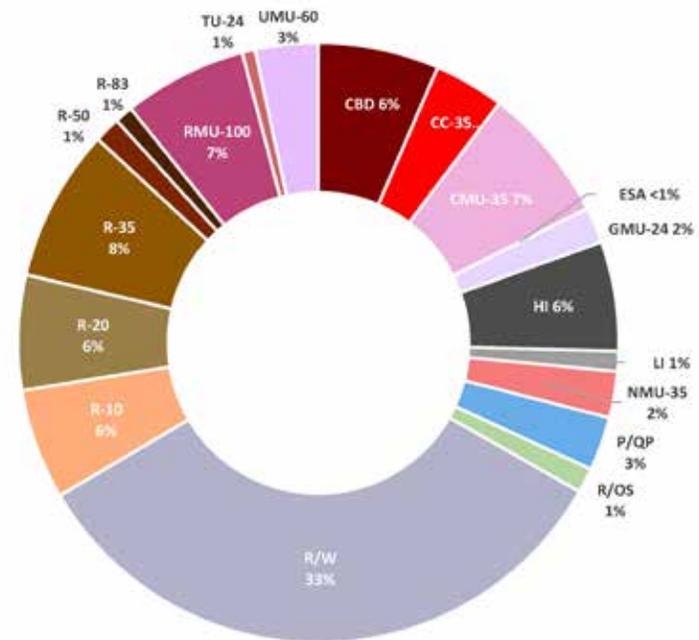
Within the core of the study area including the Downtown Core, Channel District, Harbor Island, and Central Park, the primary future land use designations are Central Business District (CBD), Regional Mixed Use-100 (RMU-100), or Community Mixed Use-35 (CMU-35). In Ybor City, future land use designations include Community Commercial-35 (CC-35), Urban Mixed Use-60 (UMU-60), Residential-50 (R-50), and CMU-35. Future land use designations in Tampa Heights include Residential-83 (R-83), Residential-35 (R-35), CC-35, and RMU-100.

West of the Hillsborough River, there are a wider ranges of future land use designations, but these areas are primarily residential or lower intensity mixed use. South of Kennedy Boulevard, the future land use designations are higher density/intensity (RMU-100, CC-35, R-35, R-50, and R-83). In North Hyde Park and West Tampa, there is a mix of low and medium density residential future land use categories (R-10, R-20, and R-35) and commercial and mixed use areas (CC-35, GMU-24, UMU-60, NMU-35).

The Port of Tampa and areas along Adamo Drive are primarily Heavy Industrial (HI) or Light Industrial (LI). Palmetto Beach includes a mixture of residential (R-10, R-20, R-35) and Transitional Use-24 (TU-24).

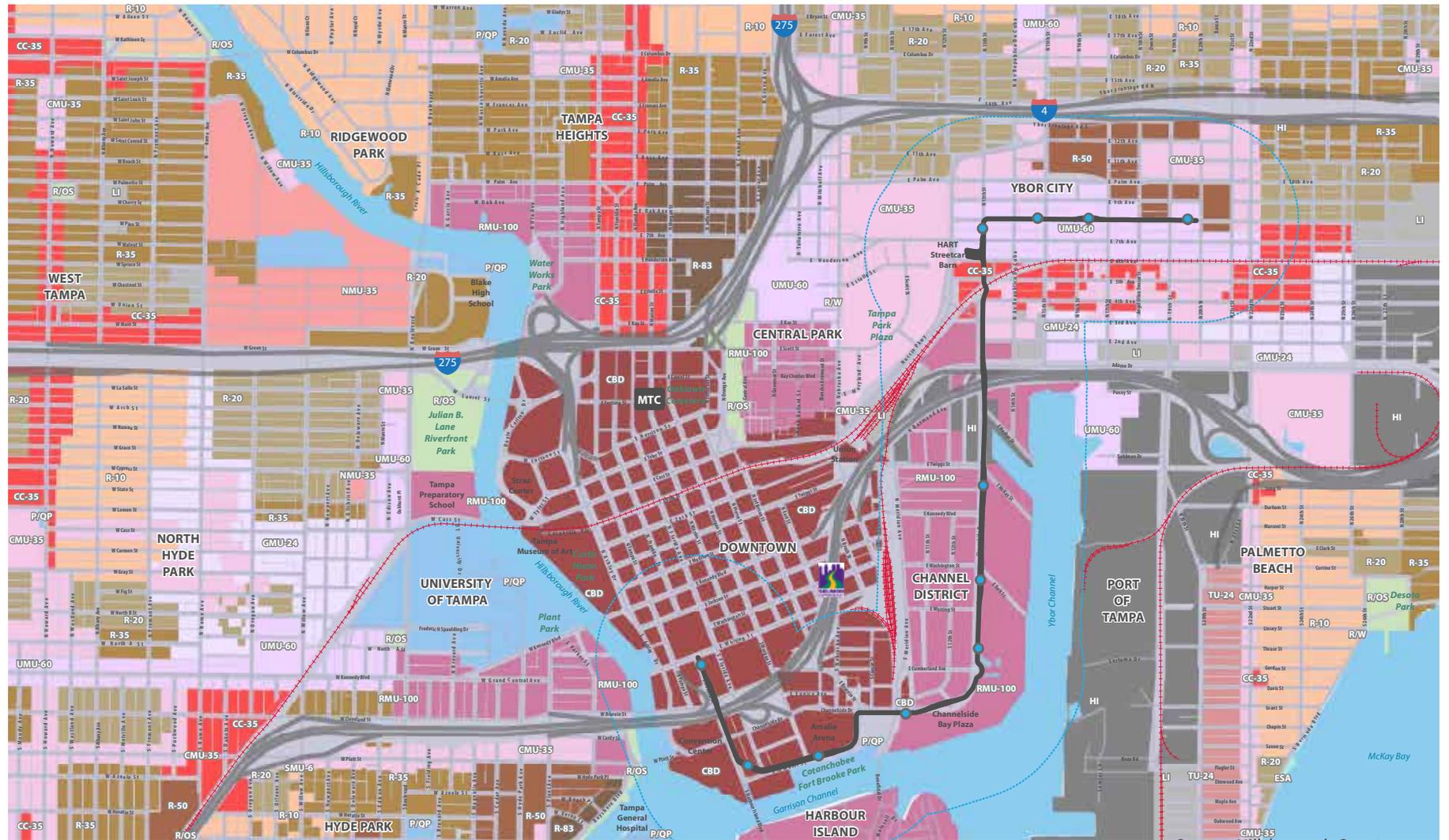
Institutional uses including the University of Tampa, Blake High School, and Cotanchobee Fort Brooke Park are designated as Public/Semi-Public (P/QP). The large parks and recreational areas including Julian B. Lane Riverfront Park, Perry Harvey Park, and Bayshore Linear Park are designated as Recreational/Open Space (R/OS).

Figure 13. Study area Future Land Use Summary Chart



Source: Hillsborough County City-County Planning Commission

Figure 14. Future Land Use Map



**Future Land Use**  
InVision: Tampa Streetcar | City of Tampa

- Existing Streetcar Stop
- Residential-10 (R-10)
- Residential-83 (R-83)
- Community Mixed Use-35 (CMU-35)
- Light Industrial (LI)
- Major Environmentally Sensitive Areas
- Existing Streetcar
- Residential-20 (R-20)
- Neighborhood Mixed Use-35 (NMU-35)
- Transitional Use-24 (TU-24)
- Heavy Industrial (HI)
- Streetcar 1/4 mile buffer
- Residential-35 (R-35)
- General Mixed Use-24 (GMU-24)
- Central Business District (CBD)
- Recreational/Open Space (R/O/S)
- Residential-50 (R-50)
- Urban Mixed Use-60 (UMU-60)
- Community Commercial-35 (CC-35)
- Public/Semi Public
- Railroad
- Right-of-Way (R/W)

Source: Hillsborough County City-County Planning Commission



Table 4. Study area Future Land Use Category Descriptions and Development Standards

Category	Dwelling Units (DU)/Acre	Floor Area Ratio (FAR)	Max Height	Acres	% of Total
<b>Regional Mixed Use-100 (RMU-100)</b> High intensity/density high-rise residential, major office, and regional serving commercial developments that because of their need for space, significant vehicular access, or intensity of use require locations related to major transportation facilities. (Intensive and general commercial, service, office and residential uses)	Up to 75 du/acre Up to 100 du/acre with bonus provisions met	up to 3.5 with bonus provisions met mixed use preferred	varies, up 24 stories	287.0	7%
<b>Urban Mixed Use-60 (UMU-60)</b> High intensity/density residential, professional office and commercial development. This is the preferred land use category to delineate community center activity centers. (Intensive and general commercial, service, office and residential uses)	up to 50 du/acre up to 60 du/acre with bonus provisions met	standard development: up to 2.0; >2.0 to 3.25 with performance provisions met; up to 3.25 in Ybor City Local Historic District only vertical mixed use development: up to 2.75*; >2.75 to 3.25 with performance provisions met	mix of building heights, up to 10 stories	146.6	3%
<b>Central Business District (CBD)</b> High intensity/density high-rise residential, major office, and regional serving commercial developments encourage and maintain the development of Tampa's central core (Central Business District) as the principal governmental, financial, commercial, convention, and entertainment center of Hillsborough County. (Intensive and general commercial, service, office and residential uses including apartments and condominiums)	n/a	n/a	height limit set by FAA	280.3	6%
<b>Neighborhood Mixed Use-35 (NMU-35)</b> Areas with no clear, identifiable development trend. (Single family and multi-family uses; neighborhood serving office and commercial uses)	up to 35 du/acre	up to 1 for non-residential uses up to 1.5 for vertical mixed use* or residential use	up to 8 stories	107.5	2%
<b>Community Commercial-35 (CC-35)</b> Medium intensity/density horizontal and vertical mixed-use and single-use commercial and residential. (Intensive and general commercial, service, office, and residential uses)	up to 30 du/acre up to 35 du/acre with bonus provisions met	standard development: up to 1.0; >1.0 to 2.0 with performance provisions met vertical mixed use development: up to 1.5*; >1.5 to 2.0 with performance provisions met	up to 5 stories	163.4	4%

Category	Dwelling Units (DU)/Acre	Floor Area Ratio (FAR)	Max Height	Acres	% of Total
<b>Community Mixed Use-35 (CMU-35)</b> Medium intensity/density horizontal and vertical mixed-use and single-use commercial and residential (Retail, general commercial, service, office, and residential uses)	up to 30 du/acre up to 35 du/acre with bonus provisions met	standard development: up to 1.0; >1.0 to 2.0 with performance provisions met vertical mixed use development: up to 1.5*; >1.5 to 2.0 with performance provisions met	up to 5 stories	316.4	7%
<b>General Mixed Use-24 (GMU-24)</b> Areas with no clear, identifiable development trend. (Residential, commercial, and light industrial uses)	up to 24 du/acre	up to 1.5		82.8	2%
<b>Transitional Use-24 (TU-24)</b> Areas with no clear, identifiable development trend. (Residential, commercial, and light industrial uses)	up to 24 du/acre	up to 1.5		29.9	1%
<b>Heavy Industrial (HI)</b> Manufacturing, research and development, flex space, industry incubators, professional office, and similar uses. (Heavy industrial uses, residential development prohibited with the exception of limited accessory residential uses [i.e., on-site security guard])	n/a	up to 1.5	up to 5 stories	253.6	6%
<b>Light Industrial (LI)</b> Manufacturing, research and development, flex space, industry incubators, professional office, and similar uses. (General industrial uses)	n/a	up to 1.5	up to 5 stories	46.6	1%
<b>Public/Semi-Public (P/SP)</b> Public and quasi-public uses (government buildings, schools, community centers, transportation and utility facilities, etc.)	n/a	n/a		125.1	3%
<b>Residential-83 (R-83)</b> High density uses. (Multi-family dwellings)	up to 75 du/acre up to 83 du/acre with bonus provisions met	up to 0.65	up to 24 stories	42.4	1%
<b>Residential-50 (R-50)</b> Medium density uses. (Multi-family dwellings, small-lot single family units including duplexes, condominiums, townhomes)	up to 40 du/acre up to 50 du/acre with bonus provisions met	up to 0.6 up to 1.0 for stand-alone office uses up to 2.0 in Ybor City Local Historic District only	up to 8 stories	60.9	1%

Category	Dwelling Units (DU)/Acre	Floor Area Ratio (FAR)	Max Height	Acres	% of Total
<b>Residential-35 (R-35)</b> Medium density uses. (Multi-family dwellings, small-lot single family units including duplexes, condominiums, townhomes)	up to 30 du/acre up to 45 du/acre with bonus provisions met	up to 0.6 up to 2.0 in Ybor City Local Historic District only	up to 8 stories	354.2	8%
<b>Residential-20 (R-20)</b> Medium and lower density uses. (Multi-family dwellings, small-lot single family units including duplexes, condominiums, townhomes)	up to 18 du/acre up to 20 du/acre with bonus provisions met	up to 0.5 up to 2.0 in Ybor City Local Historic District only	up to 3 stories	266.5	6%
<b>Residential-10 (R-10)</b> Low density uses. (Single family detaches, limited townhomes, accessory second units)	up to 9 du/acre up to 10 du/acre with bonus provisions met	up to 0.35	up to 3 stories	257.3	6%
<b>Parks, Recreation Facilities, Greenways, and Open Space (R/OS)</b> Parks, recreation facilities, greenways, natural, managed, and cultivated open space.	n/a	n/a	n/a	57.7	1%
<b>Environmentally Sensitive Areas (ESA)</b> Conservation and preservation areas. (Swamps, marshes, shallow ponds, sinkholes, mangroves, aquatic preserves, etc.)	n/a	n/a	n/a	0.7	< 1%
<b>Right-of-Way (R/W)</b>				1,435.1	33%
<b>TOTAL</b>				<b>4,314.0</b>	<b>100%</b>

\* For properties that are located within 0.5 miles of a fixed guideway transit station (light rail, bus rapid transit, etc.) the allowable densities/intensities and range of uses may be subject to the Goals, Objectives, Policies related to the Future Transit Envelope and Transit Station Area Planning (see Land Use Goal 7, Objectives 7.1, 7.2, 7.3, 7.4 and related policies). The location and type of fixed guideway transit stations can be found on the MPO Long Range Transportation 2035 Cost Affordable Transit System Map. The Future Transit Envelope can be found on the Tampa Vision Map.

Source: Imagine 2040: Tampa Comprehensive Plan, <http://www.planhillsborough.org/wp-content/uploads/2014/12/Adopted-Tampa-2040-Comp-Plan.pdf>

### 3.3 Major Destinations, Special Events & Activities

Many of Tampa's most popular cultural attractions, local events, and waterfront parks are located within a number of districts within the study area. The Hillsborough River, which runs along the Downtown Core's western border, features the Tampa Riverwalk and serves as a means of connection for many amenities in the study area. On the eastern border, the existing streetcar line connects the Downtown Core, Channel District, and Ybor City.

This section provides a summary of the study area's districts and accompanying destinations and activities. These districts include the Downtown Core, Channel District, and Ybor City; as well as Tampa's close-in suburban districts: the University of Tampa/Grand Central area, Central Park, Tampa Heights, and West Tampa. A list of districts and destinations can be found in Table 5 and Figure 15.

#### DOWNTOWN CORE

Tampa's Downtown Core is bordered by the Hillsborough River to the west, the Channel District to the east, Interstate I-275 and Scott Street to the north, and Harbour Island to the south. It is home to several businesses and well-attended museums and parks. The core's most prominent attractions include:

- » **Tampa Riverwalk** - A 2.4-mile pedestrian trail that connects nearby parks and attractions.
- » **Curtis Hixon Waterfront Park** - An eight-acre public park overlooking the Hillsborough River and the University of Tampa's Plant Hall. The park hosts a number of diverse events including the monthly Downtown Tampa Fourth Friday, the Mayor's River O'Green Fest held on St. Patrick's Day, the Gasparilla Festival of the Arts held annually, the Gasparilla Music Festival held annually, the Parade of Lights (Lighted Holiday Boat Parade) held in December, Tampa Riverwalk Trick or Treat held on Halloween, and Riverfest held annually. The park also hosts special events such as the College Football Championship and other sporting events.
- » **Tampa Museum of Art** - A modern and contemporary art museum.
- » **Glazer Children's Museum** - A children's exploratory museum with over 250,000 annual visitors.
- » **The Straz Center** - Performing Arts Center with over 680,000 annual visitors.
- » **Florida Museum of Photographic Arts** - A museum focused on exhibiting culturally important photographic art.
- » **Tampa Theater** - A historic theater which hosts over 600 events per year.
- » **Tampa Firefighters Museum** - A museum preserving Tampa's fire service history.
- » **Tampa Bay History Center** - A museum highlighting Tampa Bay's history with over 80,000 visitors per year.
- » **Tampa Convention Center** - A large-scale business event space that includes an exhibit hall, ballroom, breakout rooms, and restaurants. The Center hosts over 300 events per year.
- » **Amalie Arena** - A large-scale entertainment center where the Tampa Bay Lightning and Tampa Bay Storm play their home games. The Arena hosts over 150 concerts and other events per year and was just awarded the 2018 NHL All-Star Game.
- » **Cotanchobee Fort Brooke Park** - A 4.5-acre park located along the Hillsborough River. It includes a playground, pier, canoe launch, and trails.
- » **Center for Advanced Medical Learning and Simulation (CAMLS)** - A 90,000 square foot, state-of-the-art facility with numerous health professional education and training. About 1,350 students are enrolled at this location.
- » **Gasparilla** - A three-month-long celebration highlighting Tampa's cultural scene. At the heart of the festivities is José Gaspar, a mythical Spanish pirate who supposedly operated in Southwest Florida in the early 1800s. Events include:
  - » **Gasparilla Pirate Festival** - A pirate-themed parade along Bayshore Boulevard to the Downtown Core. It is held in late

January and hosted by Ye Mystic Krewe of Gasparilla and the City of Tampa. The parade is the 3rd largest in the United States with over 300,000 attending and had an economic impact of \$23 million on Tampa's economy. The City also hosts a separate children's parade of the same theme.

- » **Gasparilla International Film Fest** - Independent film festival located in the Downtown Core and in Ybor City.
- » **Gasparilla Distance Classic** - A series of races along Bayshore Boulevard.
- » **Gasparilla Festival of the Arts** - Festival featuring fine artists and craftsmen located at Curtis Hixon Park.
- » **Gasp! The Gasparilla Fringe Festival** - A festival focused on the performing arts located at the Tampa Museum of Art.

## CHANNEL DISTRICT

The Channel District is a residential neighborhood just east of the Downtown Core. It is bordered by Meridian Drive to the west, Ybor Channel to the east, the Selmon Expressway to the north, and Harbour Island to the south. The Channel District's attractions include:

- » **Channelside Bay Plaza** - An outdoor entertainment complex with shops, restaurants, and bars.
- » **The Florida Aquarium** - An aquarium with over 620,000 annual visitors.
- » **Port Tampa Bay** - The largest port in Florida. One of the top eight U.S. cruise ports, serving almost 1 million passengers per year.
- » **The American Victory Ship** - One of only four operational World War II ships in the United States. A national historic landmark.
- » **St. Leo University Tampa Education Center** - An adult continuing education center.

## YBOR CITY

Ybor City is a historic neighborhood bordered generally by Nuccio Parkway to the west, North 31st Avenue to the east, Interstate 4 (I-4) to the north, and Adamo Drive to the south. The neighborhood was founded in the 1880s by Vicente Martinez-Ybor and other cigar manufacturers. It was populated by immigrants of Cuban, Spanish, and Italian descent. Much of Ybor City has been designated as a National Historic Landmark District with several buildings in the area listed in the National Register of Historic Places. Ybor City's attractions include:

- » **7th Avenue** - The main street in Ybor City was recognized as one of the "10 Great Streets in America" by the American Planning Association.
- » **Columbia Restaurant** - The oldest continuously operated restaurant in Florida.
- » **Gallery AIA** - Exhibits work by local and regional architect/artists including photography, paintings, sculpture, and furniture.
- » **The Ybor City Museum** - Located in a "casita" representative of a typical cigar-worker's family home. The museum welcomes over 22,500 visitors annually.
- » **Hillsborough Community College (HCC)** - Currently has over 15,500 students enrolled at their Ybor campus.

## UNIVERSITY OF TAMPA

The University of Tampa is located west of the Downtown Core, along the Hillsborough River and currently enrolls over 8,000 students, many of whom live on campus. The Henry B. Plant Museum is located in Plant Hall on the University's campus. Plant Hall was formerly known as the Tampa Bay Hotel built by Henry B. Plant in 1891. The museum focuses on the building's former use as well as the elite lifestyle of the hotel's guests. During the holiday season, the museum hosts the annual Victorian Christmas Stroll. The building is a National Historic Landmark.

## CENTRAL PARK

Central Park is a historic residential neighborhood located north of the Downtown Core. Central Park is home to Encore!, a mixed-use redevelopment project with three new apartment buildings opened and a fourth is nearing completion. By combining the neighborhood's cultural history with elements of sustainable urban design, Encore! is playing a role in the rebirth of the Central Park neighborhood.

To the western edge of Encore! is the newly redeveloped Perry Harvey Park. The park features sculptures, interactive fountains, and an informational timeline for the historic Central Ave community. An art installation features members of the African American community who helped shape the neighborhood around the park.

## TAMPA HEIGHTS

Tampa Heights is located directly north of the Downtown Core. This mostly residential neighborhood has had many new businesses such as art galleries and coffee shops open in the last decade. Water Works Park is a major destination in the area and features an open lawn, children's splash pad and playground, amphitheater, and dog park. The nearby Ulele Spring has been restored to feed into the Hillsborough River. A popular onsite restaurant brings many more visitors to the park and neighborhood. The nearby Tampa Armature Works building will be part of The Heights redevelopment project, which will include residential, retail, office, and recreational uses in the near future.

The Stetson Tampa Law Center and Brewster Technical College are also located in Tampa Heights.

## WEST TAMPA

West Tampa is located to the northwest of the Downtown Core, on the west side of the Hillsborough River. In 2014, the City kicked off the planning and design for the renovation and expansion of the neighborhood's largest park, Julian B. Lane Riverfront Park. The 23-acre park sits on the western edge of the Hillsborough River. The renovation and expansion project will provide open green spaces for the community to congregate, dine, and experience outdoor concerts and events.

Additionally, the City of Tampa's *West River Redevelopment Plan* focuses on bringing new development to West Tampa. The development program includes a over 2,000 new housing units, 90,000 square feet of retail, and 70,000 square feet of office space. The plan also includes improved street network connection, better-quality public education and community services, and a focus on connections along the Hillsborough River. By 2025, the goal is to have created a genuinely diverse and economically integrated community.

Figure 15. Major Destinations, Special Events & Activities

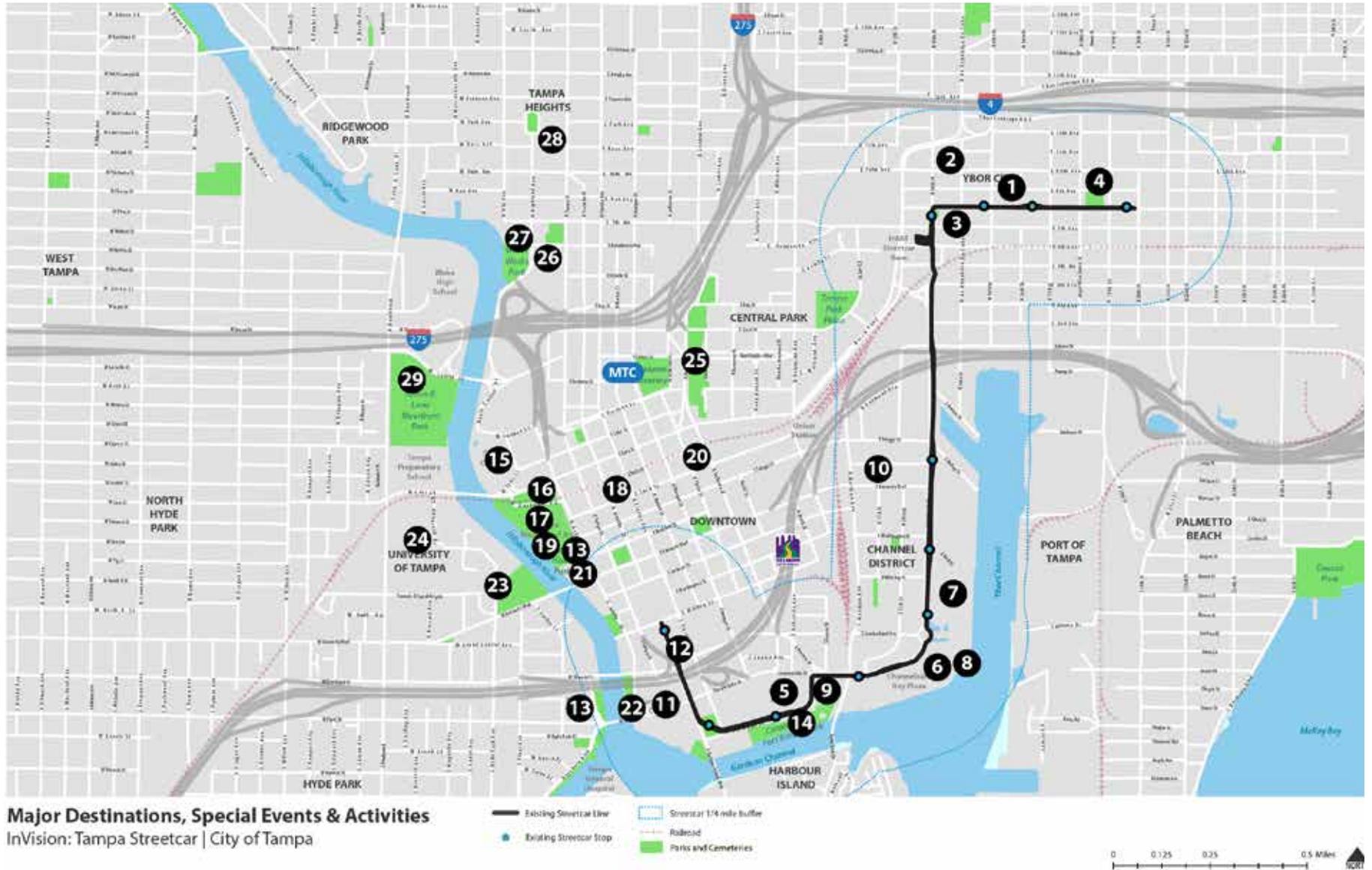


Table 5. Major Destinations, Special Events & Activities

ID	Name	Category	Description	Center City District
1	Ybor City	Cultural	In 2008, 7th Avenue, the main commercial thoroughfare in Ybor City, was recognized as one of the "10 Great Streets in America" by the American Planning Association.	Ybor City
2	Hillsborough Community College – Ybor Campus	Education	Currently has over 15,500 students enrolled at their Ybor campus.	Ybor City
3	Gallery AIA	Cultural	Exhibits work by local and regional architect/artists including photography, paintings, sculpture and furniture.	Ybor City
4	Ybor City Museum State Park	Cultural	Located in a "casita" representative of a typical cigar-worker's family home. The museum welcomes over 22,500 visitors annually.	Ybor City
5	Amalie Arena	Special Events	A large-scale entertainment center where the NHL's Tampa Bay Lightning and Tampa Bay Storm play their home games. The Arena hosts over 150 concerts and other events per year and was just awarded the 2018 NHL All-Star Game.	Downtown
6	The Florida Aquarium	Cultural	An aquarium with over 620,000 annual visitors.	Channel District
7	Port Tampa Bay	Special Events	The largest port in Florida. One of the top eight U.S. cruise ports, serving almost 1 million passengers per year.	Channel District
8	American Victory Ship Mariners Museum	Cultural	One of only four operational World War II ships in the United States. A national historic landmark.	Channel District
9	Tampa Bay History Center	Cultural	A museum highlighting Tampa Bay's history with over 80,000 visitors per year.	Downtown
10	Saint Leo University - Tampa Education Center	Education	An adult continuing education center.	Channel District
11	Tampa Convention Center	Cultural	A large-scale business event space that includes an exhibit hall, ballroom, breakout rooms, and restaurants. The Center hosts over 300 events per year.	Downtown
12	USF Health, CAMLS	Education	A 90,000 square foot, state-of-the-art facility with numerous health professional education and training. About 1,350 students are enrolled at this location.	Downtown
13	Gasparilla Events	Special Events	A 3-month long celebration highlighting Tampa's cultural scene. Over 300,000 people attended the Gasparilla Pirate Festival. It is the 3rd largest parade in the United States.	Downtown
14	Cotanchobee Fort Brooke Park	Park	A 4.5-acre park located along the Hillsborough River. It includes a playground, pier, canoe launch and trails.	Downtown

ID	Name	Category	Description	Center City District
15	Straz Center for the Performing Arts	Cultural	Performing Arts Center with over 680,000 annual visitors and over 4,148 events per year.	Downtown
16	Glazer Children's Museum	Cultural	A children's exploratory museum with over 250,000 annual visitors.	Downtown
17	Tampa Museum of Art	Cultural	A modern and contemporary art museum.	Downtown
18	Tampa Theater	Cultural	A historic theater which hosts over 600 events per year.	Downtown
19	Curtis Hixon Waterfront Park	Park	An eight-acre public park overlooking the Hillsborough River and the University of Tampa's Plant Hall. The park hosts a number of diverse events.	Downtown
20	Tampa Firefighters Museum	Cultural	A museum preserving Tampa's fire service history.	Downtown
21	Florida Museum of Photographic Arts	Cultural	A museum focused on exhibiting culturally important photographic art.	Downtown
22	Tampa Riverwalk	Park	A 2.4-mile long pedestrian trail that connects nearby parks and attractions.	Downtown
23	Henry B. Plant Museum	Cultural	Formerly known as the Tampa Bay Hotel built by Henry B. Plant in 1891. The museum focuses on the building's former use as well as the elite lifestyle of the hotel's guests.	University of Tampa. Grand Central
24	University of Tampa	Education	The University of Tampa is located west of Downtown, along the Hillsborough River and currently enrolls over 8,000 students, many of whom live on campus.	University of Tampa. Grand Central
25	Perry Harvey Park	Park	The park features sculptures, interactive fountains, and an informational timeline for the historic Central Ave community. An art installation features members of the African American community who helped shape the neighborhood around the park.	Central Park
26	Stetson Tampa Law Center	Education	Law school with over 800 students.	Tampa Heights
27	Water Works Park	Park	Water Works Park is a major destination with open lawn, children's splash pad and playground, amphitheater, and dog park.	Tampa Heights
28	Brewster Technical College	Education	Technical college with over 581 students.	Tampa Heights
29	Julian B. Lane Park	Park	Planning and design for the renovation and expansion is underway for this 23-acre park.	West Tampa

### 3.4 Development Activity

The Tampa Streetcar Feasibility Study area has seen a significant level of development activity in recent years and more development is anticipated over the next five to ten years. This section of the report summarizes recent development constructed within the study area since 2011, development currently under construction, and development planned in the next decade. Several large-scale master-planned projects are planned or underway within the study area and these are also described in the following narrative.

#### RECENT DEVELOPMENT (2011-2017)

From 2011 to 2017, a number of multi-family residential and hospitality projects were completed in the study area. The residential projects added

over 3,700 residential units to the study area. Two new hotels, Le Meridien and Aloft, were also constructed Downtown adding 260 lodging units to the study area. These projects are shown in Figure 17 and described in Table 6.

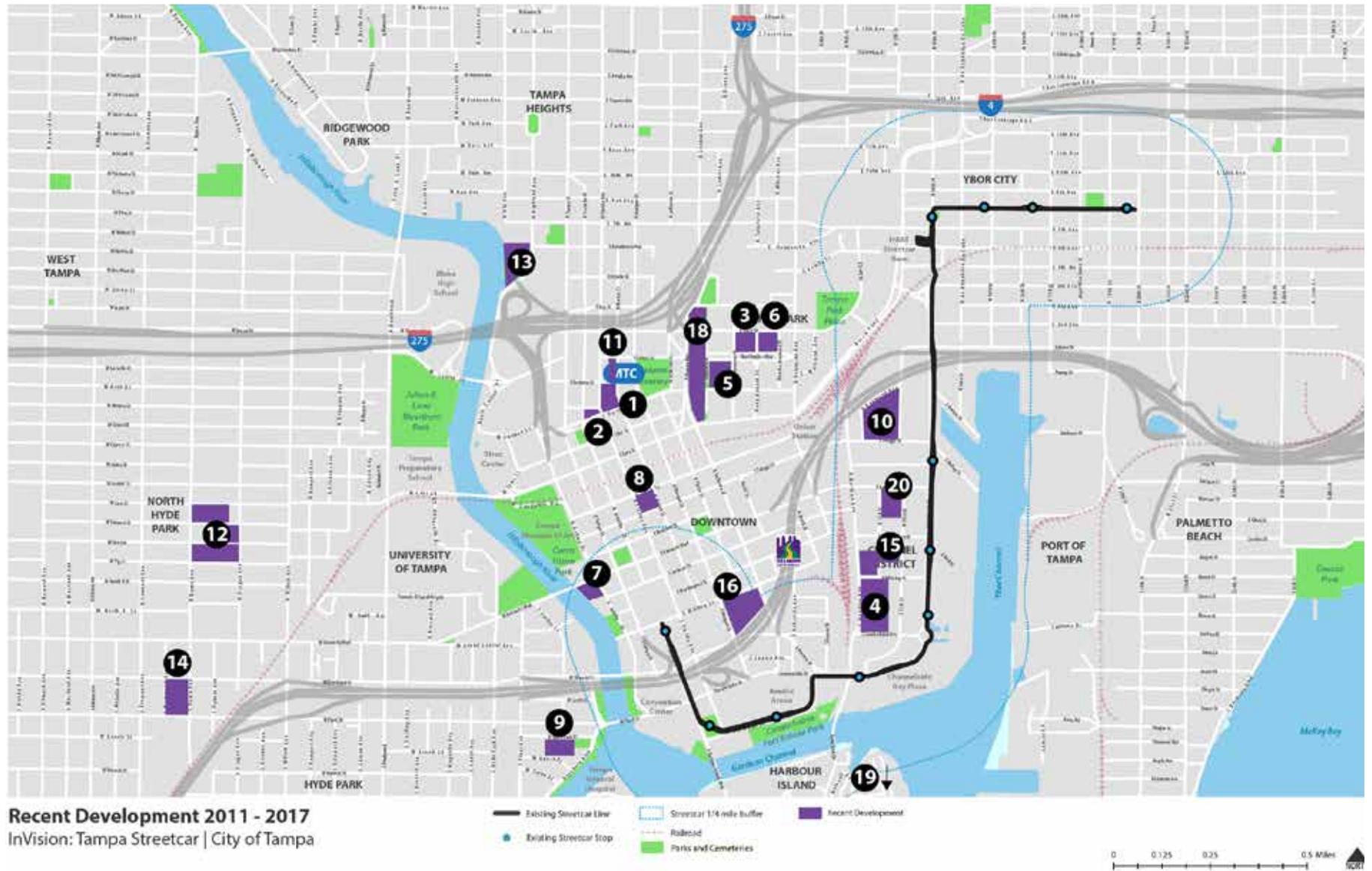
The majority of the completed projects were low- to mid-rise (3 to 8 stories) residential rental properties in the Downtown, Channel District, and Harbour Island. Two high-rise (21 and 23 stories) residential rental properties in Harbour Island and the Channel District. Two residential projects were built in Hyde Park and one project was built in North Hyde Park. Four of the new developments are low-income senior housing, including two at the major development Encore! in Central Park and two in Downtown. A mixed-income housing project was also completed at Encore!

Table 6. Recent Development, 2011-2017

ID	Building Name	Developer/Owner	Address	Center City District	Year Completed	Use Mix	Floors	Residential (Units)	Lodging (Rooms)
1	Metro 510	Sage Partners	502 E Harrison St	Downtown	2011	Residential (rent)	5	120	-
2	Vista 400	Royal American Management, Sage Partners	400 E Harrison St	Downtown	2011	Senior Residential (rent)	14	168	-
3	Ella (Encore)	Tampa Housing Authority	1210 Ray Charles Blvd	Central Park	2013	Senior Residential (rent)	7	160	-
4	Pierhouse Channelside	Related Group LLC	1226 E Cumberland Ave	Channel District	2013	Residential (rent)	4	356	-
5	Trio (Encore)	Tampa Housing Authority	1101 Ray Charles Blvd	Central Park	2014	Residential (rent)	6	141	-
6	The Reed (Encore)	Tampa Housing Authority	1240 Ray Charles Blvd	Central Park	2014	Senior Residential (rent)	7	158	-
7	Aloft Tampa Downtown	Liberty Group	100 W Kennedy Blvd	Downtown	2014	Hotel	8	-	130

ID	Building Name	Developer/Owner	Address	Center City District	Year Completed	Use Mix	Floors	Residential (Units)	Lodging (Rooms)
8	Le Meridien Tampa Downtown	Starwood Hotels	601 N Florida Ave	Downtown	2014	Hotel	4	-	130
9	2 Bayshore	Crescent Resources	101 W Beach Pl	Hyde Park	2014	Residential (rent)	8	367	-
10	Bell Channelside	Bell Partners	1120 E Twiggs St	Channel District	2014	Residential (rent)	5	422	-
11	Madison Heights	American Realty Development	1250 N Marion St	Downtown	2014	Senior Residential (rent)	7	80	-
12	NoHo Flats	Pollack Shores	401 N Rome Ave	UT/Grand Central	2014	Residential (rent)	3	311	-
13	Water Works Park		1710 N Highland Ave	Tampa Heights	2014	Park	-	-	-
14	Bleecker Hyde Park		1702 W Cleveland St	Hyde Park	2015	Residential (rent)	5	259	-
15	SkyHouse Channelside	Novare Group	112 N 12th St	Channel District	2015	Residential (rent)	23	320	-
16	The Aurora	Richman Group	124 S Morgan St	Downtown	2016	Residential (rent)	4	351	-
17	Tampa Riverwalk			Downtown/ Tampa Heights	2016	Linear Park	-	-	-
18	Perry Harvey Park		900 E Scott St	Central Park	2016	Park	-	-	-
19	500 Harbor Island	Intown Group/Framework Group	500 Knights Run Ave	Harbour Island	2017	Residential (rent)	21	235	-
20	The Fitzgerald	Florida Crystals	1208 E Kennedy Blvd	Channel District	2017	Residential (rent)	8	300	-

Figure 16. Recent Development, 2011 - 2017



## MASTER DEVELOPMENTS

Several master developments are underway or planned within the study area, including Encore!, The Heights, the Waterfront District, the West River Redevelopment, and Port Tampa Bay. These large-scale, mostly mixed-use projects have the potential for thousands of new residential units, approximately 3.5 million square feet of commercial and office space, and several hundred lodging units. These developments shown in Figure 21 have the potential to significantly reshape the study area.

### Encore!

Encore! is a \$425 million mixed-use, public-private housing development that began construction in 2011 in the Central Park area. As a tribute to the long-standing African-American communities and jazz scene that once thrived here, all of the building names in Encore! (The Ella, The Reed, The Trio, and The Tempo) are musically themed. The newly completed Perry Harvey Park forms the western boundary of the development.

The project includes two recently constructed senior housing apartment buildings, The Ella (160-units) and The Reed (158-units), and two multi-age apartment buildings, The Trio (141-units) and The Tempo (203-units under construction). Future plans calls for a middle school, a museum, an additional apartment building, a high-rise multifamily building, as well as an office/bank/pharmacy building, a 200-room hotel, condo/retail buildings, and a grocery store. The additional office square footage is 180,000 square feet and the total retail square footage is 36,000 square feet.

### The Heights

The Heights is a 43-acre, mixed-use waterfront project located just north of Downtown near Water Works Park. As a pedestrian-friendly, mixed-use center, The Heights will connect the growing neighborhoods north of downtown, like Seminole Heights and Tampa Heights, to the Downtown core via the Riverwalk.

The developer, Soho Capital, has plans to transform the existing 70,000-square-foot Armature Works building into a multi-use space with a market, co-work space, two restaurants, and event hall space. The space includes three event halls available for rent, including a rooftop patio.

Figure 17. *The Trio at Encore!*



Source: <https://www.apartments.com/the-trio-at-encore-tampa-fl/fes4edr/>

Figure 18. *Rendering of The Heights Project (Armature Works and The Pearl)*



Source: <http://www.tampabay.com/news/business/realestate/the-heights-project-in-tampa-to-open-next-year-with-apartments-market-and/2281748>

The “Heights Market” will offer 22,000-square-foot space with an array of restaurants in vendor like stalls operated by local chefs and entrepreneurs.

The Heights will also include the Pearl, an upscale four-building, 314-unit apartment community with an additional 28,500 square feet of retail space facing the Hillsborough River. A total of 1,400 units and 306,500 square feet of retail will be built upon project completion. A 3-acre green space separates the Armature Works building from the river, where paddleboards, kayaks and other watercraft will be offered for rent. Long-term plans call for additional luxury riverfront condominiums and a 260,000-square-foot office park with at least one hotel with 260 rooms. The project is valued at more than \$820 million.

### Water Street Tampa

The Water Street Tampa project is the most prominent development in the pipeline within the study area. The 57-acre project includes the Amalie Arena, Channelside Bay Plaza, and surrounding properties. The project stems from a partnership between Tampa Bay Lightning owner Jeff Vinik and Microsoft founder Bill Gates’ Cascade Investment firm. Together, they have formed the project’s developer Strategic Property Partners.

Over the next decade, plans call for up to 9 million square feet of residential, office, commercial, educational, entertainment, recreational, cultural, and hotel space with a total investment exceeding \$3 billion. Upon completion there will be 3,500 residential units, 650 hotel rooms, and 2.6 million square feet of office space. Currently, the project is underway with \$35 million worth of infrastructure and roadway construction. The new USF Health Morsani College of Medicine and Heart Institute broke ground in 2017 and is anticipated to open in 2019 and house 2,275 faculty, staff, and students.

### The West River Redevelopment

In 2016, the City of Tampa adopted the *West River Redevelopment Plan* to provide a vision and guidance on the future of a 120-acre area on the western bank of the Hillsborough River northwest of Downtown near I-275. Nearly 80 percent of the area is in public ownership, either owned by the City of Tampa, Hillsborough County, the School Board of Hillsborough County, or the Tampa Housing Authority.

Figure 19. Rendering of Water Street Tampa



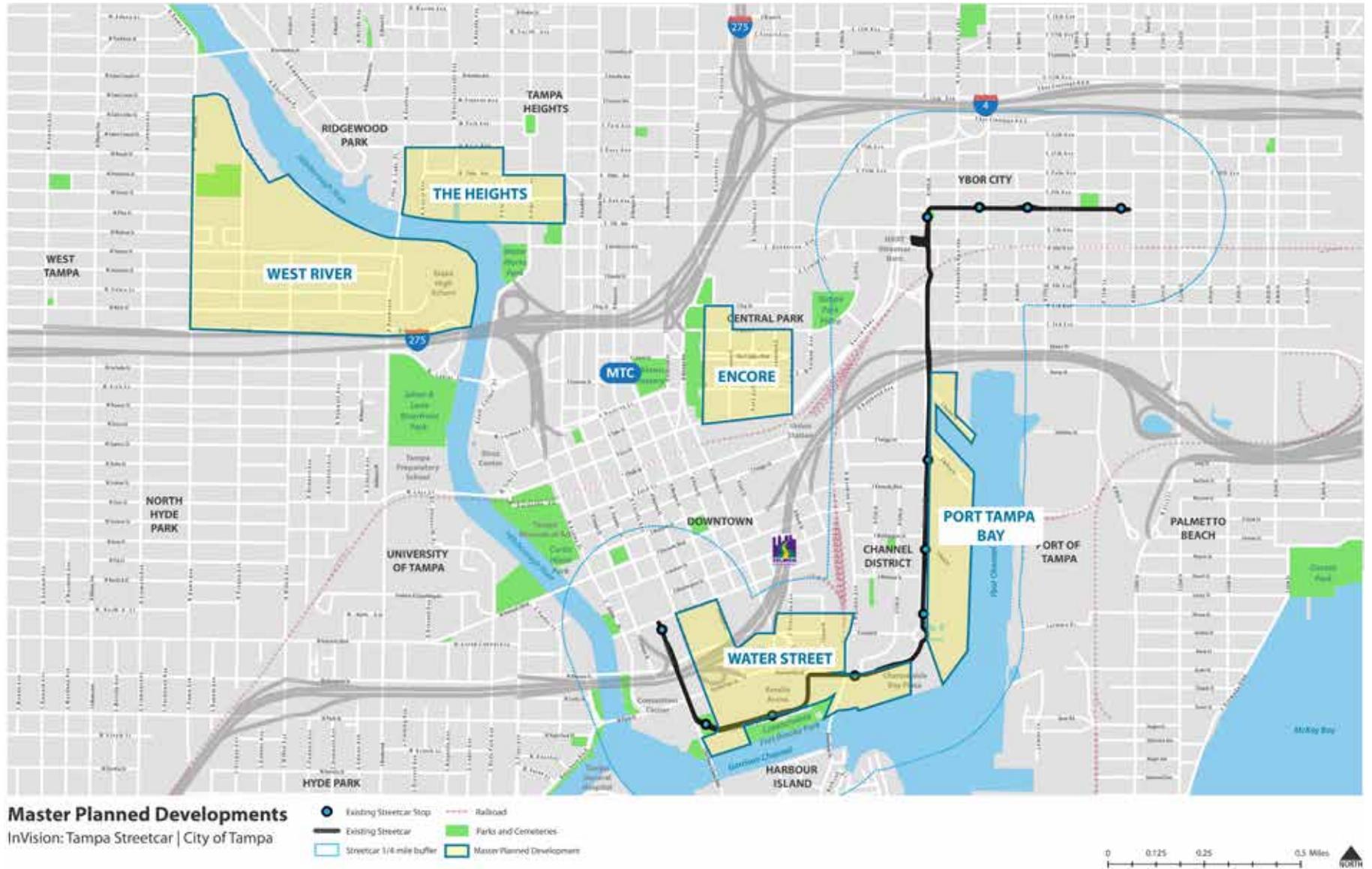
Source: <http://www.tbo.com/news/business/viniks-development-will-become-first-wellness-focused-city-district-20150929/>

Figure 20. Rendering of West River Development



Source: <http://tampabay.uli.org/news/event-cap-whats-next-west-river/>

Figure 21. Master Planned Developments



In partnership with the Tampa Housing Authority, The Related Group and The Urban Development Group have formed a joint venture to redevelop a majority of the West River area. The project will begin with demolition of North Boulevard Homes, a 1940s-era housing project, and other buildings. Streets will be extended or reconnected, up-to-date utilities will go in the ground and residential buildings and retail establishments surrounded by green space will rise. Existing public schools will remain.

The development program includes more than 1600 new residential units. A total 117,000 square feet of retail and 77,000 square feet of professional office space is planned. The plan also includes improved street network connection, better-quality public education and community services, and a focus on connections along the Hillsborough River to developing activities south of I-275 in North Hyde Park. Ultimately, by 2025, the goal is to have created a genuinely diverse and economically integrated community.

### Port Tampa Bay

In partnership with the City of Tampa and the Channel District Community Redevelopment Agency (CRA), Port Tampa Bay created the *Channel District Vision* in 2015 as a conceptual plan for transforming 45-acres of port-owned land within the Channel District. The plan calls for a transformation of the industrial waterfront site into a community centerpiece. The site is adjacent to Channelside Drive and the Ybor Channel. The concept plan calls for the development of more than 9 million square feet of mixed-use space and \$1.5 billion in private investment over the next decade.

While still in the preliminary phase, the vision plan features a mix of private development and public amenities, from residential, retail, office and hotel space to a central park, marina and multipurpose cruise ship terminal. A key element of the plan are two landmark towers that will be among the tallest and most notable on Florida's West Coast. The plan also calls for wide sidewalks, lush landscaping, bike lanes, and a mix of stores and restaurants. On the waterside of the centerpiece is central park, an elevated walkway with views of the port and cruise ships. The plan also calls for upgrades to Channelside Drive and the surrounding public spaces.

Figure 22. Rendering of Port Tampa Bay - Channelside Park



Source: <http://www.ptbchannelside.com/>

Reimagining the Port Tampa Bay waterfront property in the Channel District is part of a larger, overall plan for the 5,000-acre port over the next two decades.

### UNDER CONSTRUCTION (AS OF JUNE 2017)

Several projects are under construction in the study area that are scheduled to be completed in 2017 and 2018. These projects are slated to maintain the growth of multi-unit rental properties while introducing larger-scale, mixed-use projects to the area. Two additional residential projects are under construction in the Channel District, including one mixed-use project with over 300 residential units and 37,000 square feet of retail. Two new 350-plus unit residential projects are underway in the Downtown. The fourth building at Encore! is also currently under construction.

North Hyde Park, Ybor City, and Harbour Island also have multiple residential projects underway. These areas will see significant growth with the development of multiple townhomes and apartments, including 336 units in North Hyde Park, 340 units in Harbour Island, and 278 units in Ybor City.

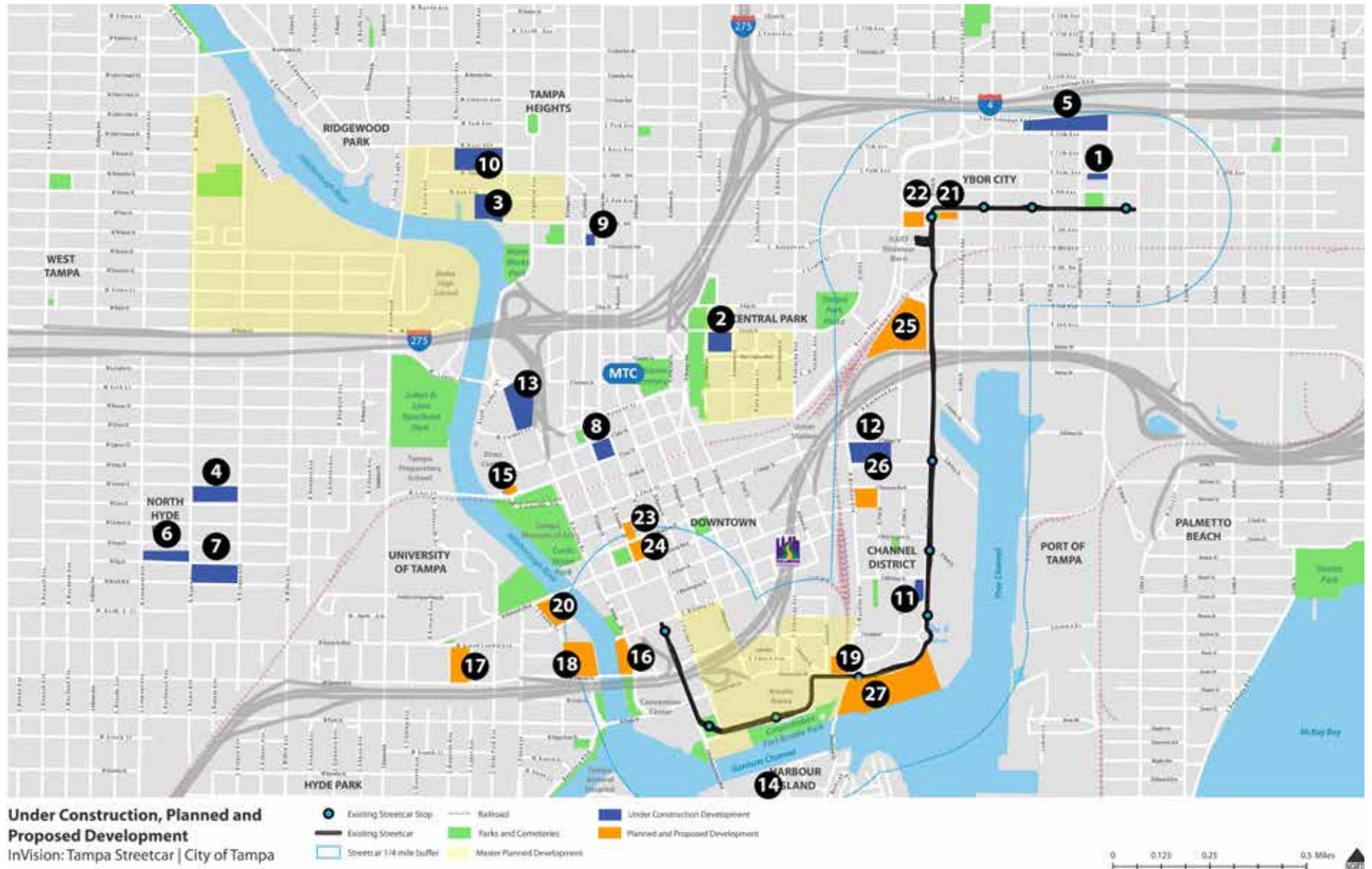
Tampa Heights will see the most drastic change with the addition of The Heights project's Armature Works redevelopment (70,000 square foot community hub with event spaces, eateries, a co-working space, public market) and the 300-unit residential Pearl project. The area will also see the addition of Hall on Franklin, an 8,000 square foot food hall eatery featuring a collection of local chefs.

As shown in Figure 23 and Table 7, these under construction projects will result in approximately 2,600 additional residential units and over 162,000 square feet of retail space.

Table 7. Projects Under Construction (as of June 2017)

ID	Building Name	Developer/Owner	Center City District	Master Development	Completion	Use Mix	Residential (Units)	Lodging (Rooms)	Office (SF)	Retail (Sf)
1	Oliva Apartments	Darryl Shaw	Ybor City	n/a	2017	Residential	38	-	-	-
2	Tempo	Tampa Housing Authority	Central Park	Encore!	2017	Residential	203	-	-	-
3	Armature Works	SoHo Capital	Tampa Heights	The Heights	2017	Restaurant/ Event Space	-	-	-	70,000
4	Lennar at West End Townhomes	Southport Financial Services	North Hyde Park	n/a	2017	Residential	39	-	-	-
5	Bainbridge Ybor	The Bainbridge Companies	Ybor City	n/a	2017	Residential	240	-	-	-
6	Havana Square	Pollack Shores	North Hyde Park	n/a	2017	Residential	274	-	-	-
7	301 N. Rome	Cardinal Point Management	North Hyde Park	n/a	2017	Residential, Retail	23	-	-	6,700
8	NINE15	Carter (Atlanta)	Downtown	n/a	2017	Residential, Retail	362	-	-	8,000
9	Hall on Franklin	Jamal Wilson	Tampa Heights	n/a	2017	Restaurant	-	-	-	8,000
10	The Pearl	SoHo Capital	Tampa Heights	The Heights	2018	Residential	314	-	-	28,500
11	The Devillar	Mercury Advisors	Channel District	n/a	2018	Residential	61	-	-	-
12	The Channel Club	Mercury Advisors and ECI Group	Channel District	n/a	2018	Residential, Retail (Publix)	324	-	-	37,600
13	Crescent Riverwalk	Crescent Communities	Downtown	n/a	2018	Residential, Retail	394	-	-	3,600
14	Icon Harbour Island	Related Group	Harbor Island	n/a	2018	Residential	340	-	-	-

Figure 23. Under Construction, Planned & Proposed Developments



## PLANNED & PROPOSED DEVELOPMENTS

In addition to the recently constructed and projects under construction, the study area has numerous planned or proposed developments. Some of these projects are part of the master developments previously described, but many

are separate development projects. As shown in Figure 23, these projects are primarily located in the Ybor City, Downtown, Channel District, and the University of Tampa/Grand Central. For many of these planned or proposed projects, specific development details are not complete, but current estimates for these projects are summarized in Table 8.

Table 8. *Planned and Proposed Developments*

ID	Building Name	Developer/Owner	Center City District	Master Development	Completion	Use Mix	Residential (Units)	Lodging (Rooms)	Office (SF)	Retail (Sf)
15	AER	Intown/Framework Group, Inc.	Downtown	n/a	2018	Residential	360	–	–	10,000
16	Riverwalk Tower	Feldman Group, Tower Realty	Downtown	n/a	2018	Residential, Retail, Office	220	–	215,000	TBD
17	The Altis	Altman Cos.	University of Tampa/Grand Central	n/a	2018	Residential, Retail	314	–	–	10,000
18	Tampa Tribune Site	Related Group	University of Tampa/Grand Central	n/a	2018	Residential	400	–	–	–
19	USF Health Morsani College of Medicine and Heart Institute	Strategic Property Partners	Downtown	Water Street	2019	Educational, Office	–	–	TBD	TBD
20	Lafayette Place	Hillsborough River Realty Company	University of Tampa/Grand Central	n/a	2019	Residential, Retail, Office, Lodging	375	350	690,000	60,000
21	Casa Pedroso		Ybor City	n/a	–	Residential	33	–	–	–
22	Ybor Marti	Darryl Shaw, Ariel Quintela, Chancey Design Partnership	Ybor City	n/a	–	Residential	128	–	–	–
23	200 Madison	Urban Core Holdings, LLC	Downtown	n/a	–	Residential	TBD	–	–	–

ID	Building Name	Developer/Owner	Center City District	Master Development	Completion	Use Mix	Residential (Units)	Lodging (Rooms)	Office (SF)	Retail (Sf)
24	(Unnamed)	HRI Properties	Downtown	n/a	–	Hotel, Retail, Office	225	223	–	7,000
25	Gas Worx	Phillips	Ybor City	n/a	–	Residential, Retail	500	–	–	–
26	Hampton Inn & Home 2 Suites by Hilton	Liberty Group	Channel District	n/a	–	Lodging	–	213	–	15,000
27	Channelside Bay Plaza Redevelopment	SPP, LLC	Channel District	Waterfront District	–	Retail, Residential, Office	–	TBD	–	100,000 (inc. office)

### 3.5 Transportation

Given the extent of recent and planned development within the study area, ensuring that the transportation network can meet the needs of residents, workers, and visitors is a primary concern. The Center City and surrounding neighborhoods are served by multiple transit services and additional service is proposed. This section provides an overview of the existing and planned mobility services in the study area, along with a discussion of roadway capacity and the potential issues with the expansion of streetcar or other transit services.

#### EXISTING MOBILITY SERVICES

Many transit services currently operate in the study area's neighborhoods. As a regional activity center, the Center City's range of existing transit services includes regional rail and bus, a local bus network, circulator-type shuttles, and a diversity of other local mobility options. And due to the connected, grid-layout of downtown, walking is a viable option for many short distance trips.

While transit options have expanded with on-demand, door-to-door services, and connections around downtown, such as bike share, an electric shuttle, rideshare and a water taxi, the network is not as robust as will be needed for a downtown urban core that has the potential for major growth. According to the TBRPM projections, the study area is expected to gain an additional 31,000 residents and 34,000 employees between 2020 and 2040. The existing bus and shuttle circulators do not have the capacity to serve the large, diverse populations interacting within and among the Center City destinations, particularly during daily peak periods and major events.

Analysis of the existing transit data and travel patterns reveal that each of the services provide a niche service to the area and serves a more distinct travel market. For example, HART local buses are moving people in and out of the study area along the major and transit corridors. Bike share is extending the reach within the study area along bike paths, scenic waterways, and to area attractions. The Downtowner shuttle is encouraging mobility without the use

of private vehicles. The streetcar is providing a direct service between the entertainment districts of Ybor City, Amalie Arena, Tampa Convention Center, and Channelside Bay Plaza.

Analysis also indicates that no one service is singularly moving significant numbers of people between the major destinations within the study area.

#### TECO Line Streetcar

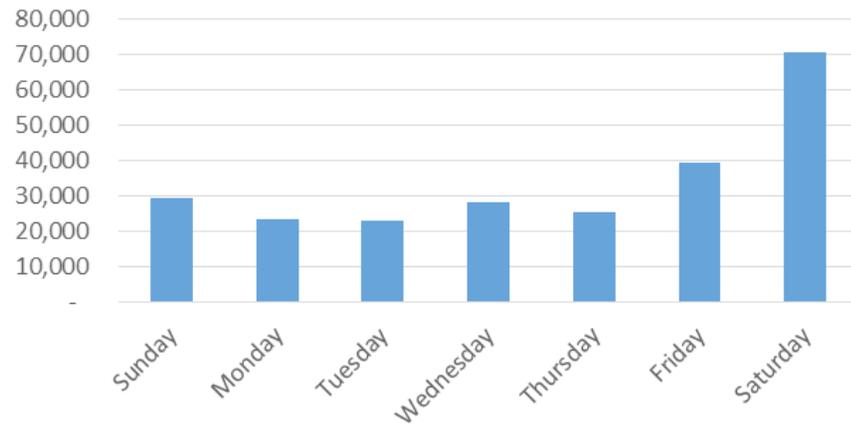
Operated by HART, the existing Tampa Streetcar operates along the historic TECO railroad line that connects the hotel, restaurant, and entertainment destinations in Ybor City at its north terminus to Channel District, Channelside Bay Plaza, Tampa History Center, Amalie Arena, hotels, and Tampa Convention Center at its southern terminus. While there are residential areas in the central portion of the streetcar line and data is not available for the streetcar at stop-level, it appears that the majority of users are boarding or alighting at the north and south ends of the lines.

Typical streetcar ridership is consistent Sunday through Thursday, increases on Friday and peaks on Saturdays. This indicates that the service is largely used for weekend events and serves recreation and entertainment venue goers (see Figure 24).

The average monthly ridership is approximately 31,000 riders. Since 2011, ridership has dropped below this long-term average to an average monthly ridership of approximately 25,000 (Figure 25). However, this downward trend corresponds with a trend in reduced service (4,855 fewer hours in FY 2016 than in FY 2003) that began in FY 2008.

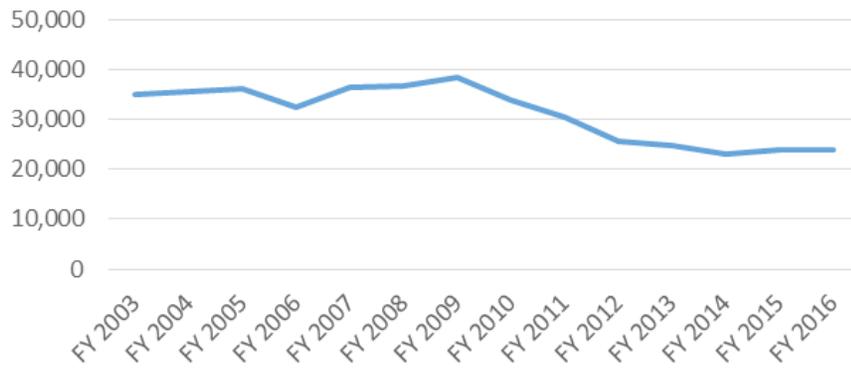
By analyzing annual ridership versus revenue service hours between FY 2003 and FY 2016, the passengers/revenue hour ratio has remained relatively steady, averaging 25 passengers/revenue hour (Figure 26). These trends indicate a service that has been successful and stable, but has not seen an increase in ridership with the increase in population in the study area (downtown Tampa residents doubled from 2008 to 2016).

Figure 24. Streetcar Annual Totals by Day of Week (2016)



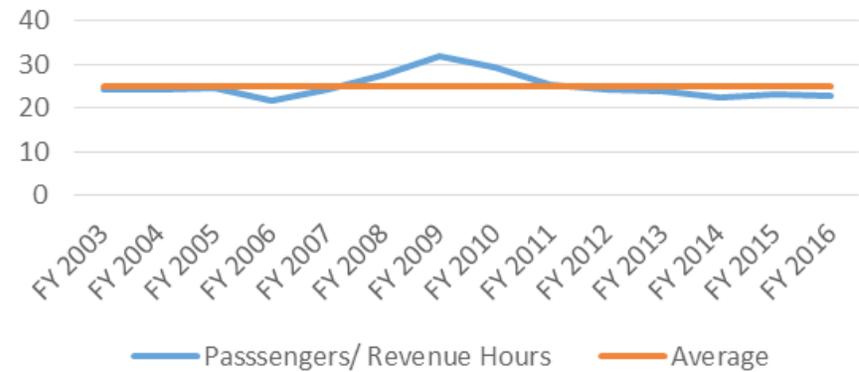
Source: HART

Figure 25. Streetcar Average Monthly Ridership 2003 - 2016



Source: HART

Figure 26. Streetcar Average Monthly Ridership 2003 - 2016



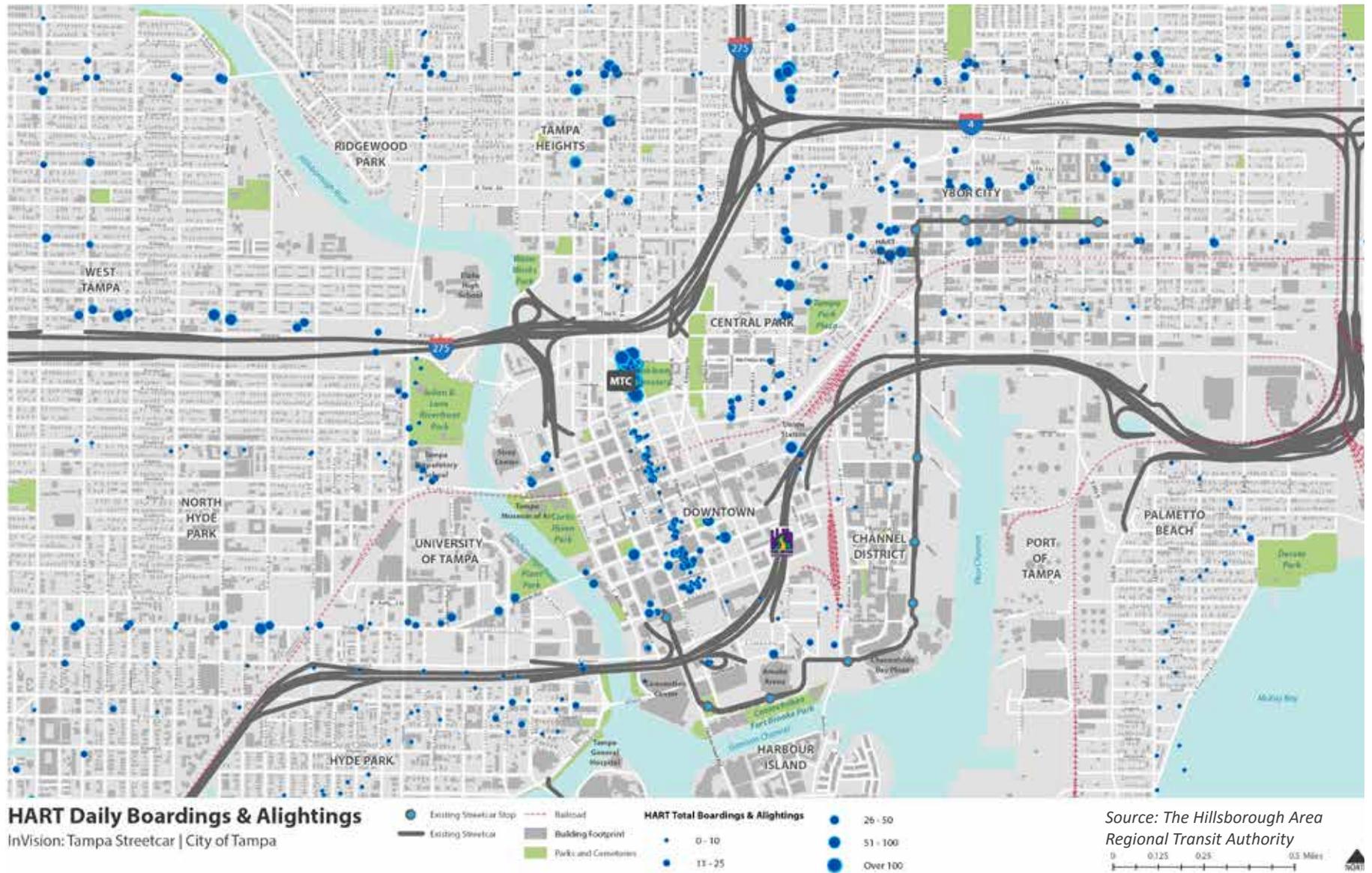
Source: HART

### HART Traditional Buses

An analysis of HART Automated Passenger Count (APC) data for the 27 bus routes that service the study area, was organized by typical weekday, Saturday, and Sunday ridership in the month of December 2016. This data contains bi-directional daily passenger ridership counts for bus stop locations. The APC data was summarized by total boardings and alightings as presented in Figure 27 to determine ridership and travel patterns of local bus users in the downtown area.

Existing transit service and ridership activity is centered along Marion Transitway and the Marion Transit Center (MTC); in proximity to the Meridien Hotel, Federal/County Courthouse and County Center buildings; and Ybor City south of Interstate 4. There are approximately 8,200 HART transit riders per typical weekday in the study area.

Figure 27. HART APC Data Analysis - Total Boardings & Alightings, Typical Weekday, December 2016



### HART In-Towner

The HART In-Towner is a free, circulating trolley bus operated by HART in downtown Tampa. The service, which operates during peak hours (every 15 minutes between 6 am - 8:30 am and 3:30 pm - 6 pm), connects the Marion Transit Center (MTC) to the Channel District and Harbour Island during weekday service. The In-Towner also operates on Saturdays from 11 am - 7 pm and loops between MTC and Channel District every 30 minutes.

The In-Towner averages about 130 boardings and alightings each weekday (Figure 28). Approximately half of these boardings and alightings occur at the MTC. The next highest stop – Dick Greco Plaza – sees about 20 percent of the remaining boardings and alightings.

While detailed In-Towner origin-destination travel data was not available, the analysis of the weekday In-Towner stop-level ridership data indicates that passengers tend to use the service more as a first/last mile service for regional commuting and less as a circulator to major activity centers in the study area.

### Downtowner

The Downtowner is a free, electric shuttle offered by the Tampa Downtown Partnership. The shuttle operates within a two- to three-mile radius of downtown and is available on-demand for door-to-door service. The six-passenger vehicles operate between 6 am and 11 am until 11 pm, seven days a week. The free fare combined with an app-driven ride request process make the Downtowner a convenient way for residents, visitors, and workers to grab a quick ride to destinations within the service area.

Since the Downtowner began operating in fall 2016, the service has been very successful. The service provides an average of 337 trips per weekday and approximately 14,000 trips per month. According to the Tampa Downtown Partnership's 2016 *Workforce-Residential Study*, "25 percent of workers have used the Downtowner proving they are early adapters of new transportation modes if they are convenient."

Table 9. Downtowner Top Five Origins and Destinations

Top 5 Origins (% of trips)	Top 5 Destinations (% of trips)
University of Tampa (14% of trips)	University of Tampa (14% of trips)
Channel District Center (12% of trips)	Tampa Theater (12% of trips)
Tampa Theater (11% of trips)	Esplanade (9% of trips)
Harbour Island (10% of trips)	Channel District Center (9% of trips)
Channel District North (9% of trips)	Marion Transit Center (8% of trips)

Source: *The Downtowner*

Origin-destination (O-D) data for each trip between October 2016 and January 2017 were analyzed. A heat map of total O-Ds was produced to show concentrations of trip beginnings and ends (Figure 29). The heat map shows a darker concentration of color to represent higher boarding and alighting activity. In addition, an O-D matrix was developed to identify the top five originating zones and top five destination zones. A map series depicting travel characteristics for the top five origins is provided as Figure 30 through Figure 34. A table summarizing Downtowner destinations by origin zone is included as Table 9.

The analysis reveals a strong travel demand between University of Tampa and the Channel District North and Center (an east/west flow pattern) and a north/south flow pattern from Harbour Island, north to the Esplanade and the Tampa Theater. There is likely a correlation with the demand by students as early adopters to the new technology-driven mobility solution.

Figure 28. In-Towner Average Daily Boardings & Alightings, December 2016 to March 2017

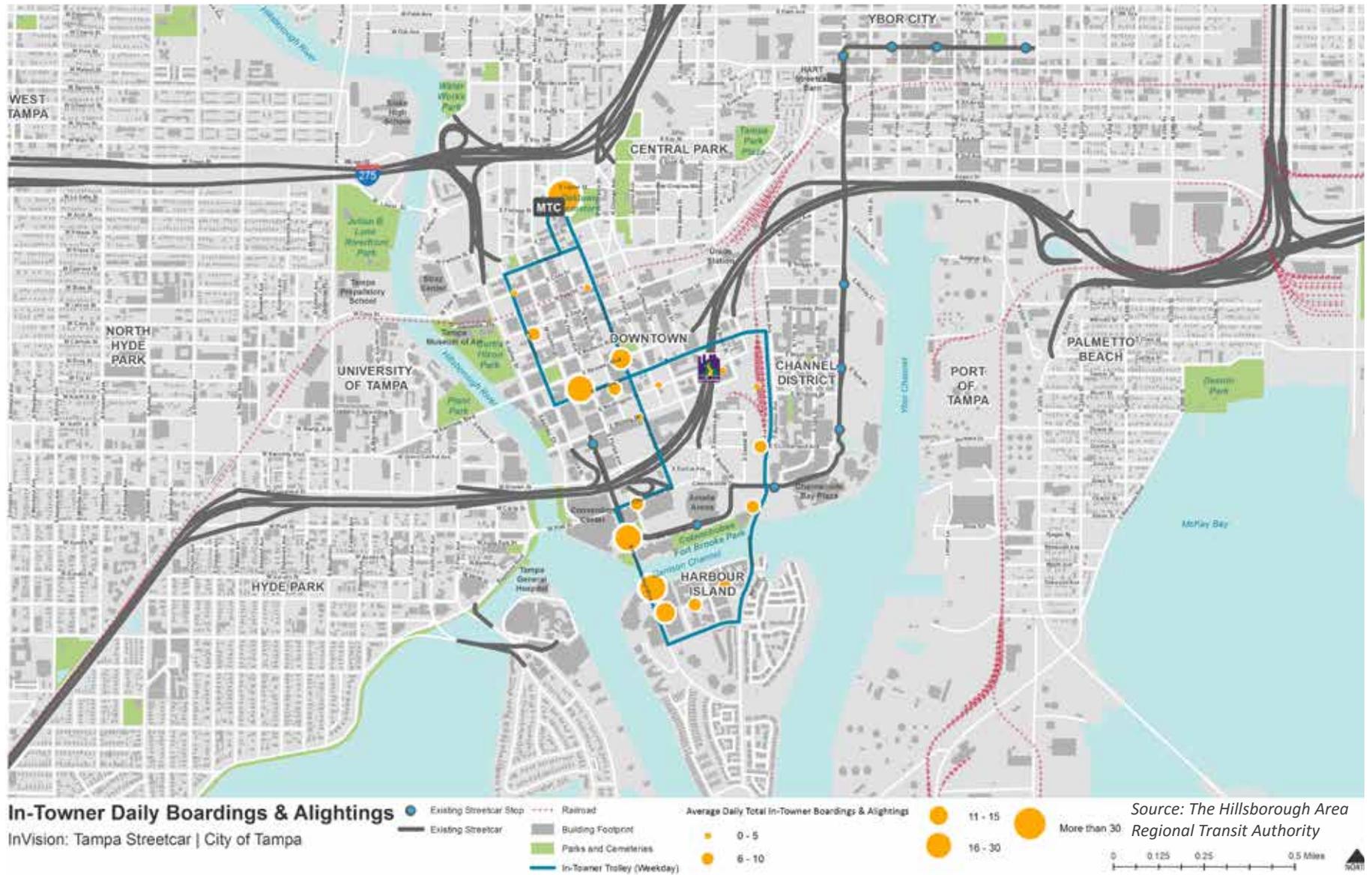


Figure 29. Downtowner Boardings & Alightings, October 2016-January 2017

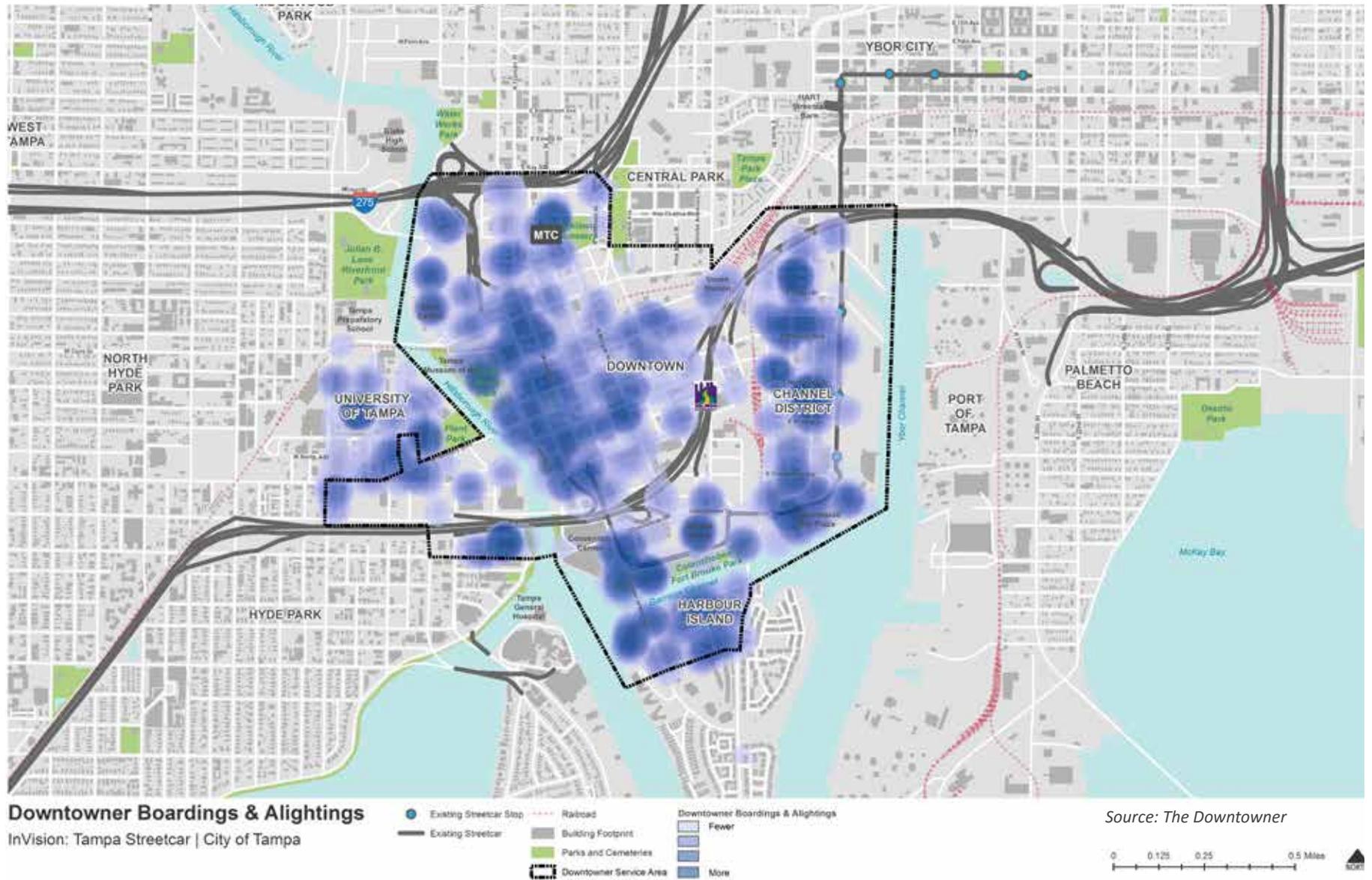


Figure 30. Downtowner Trips Originating from UT, October 2016-January 2017

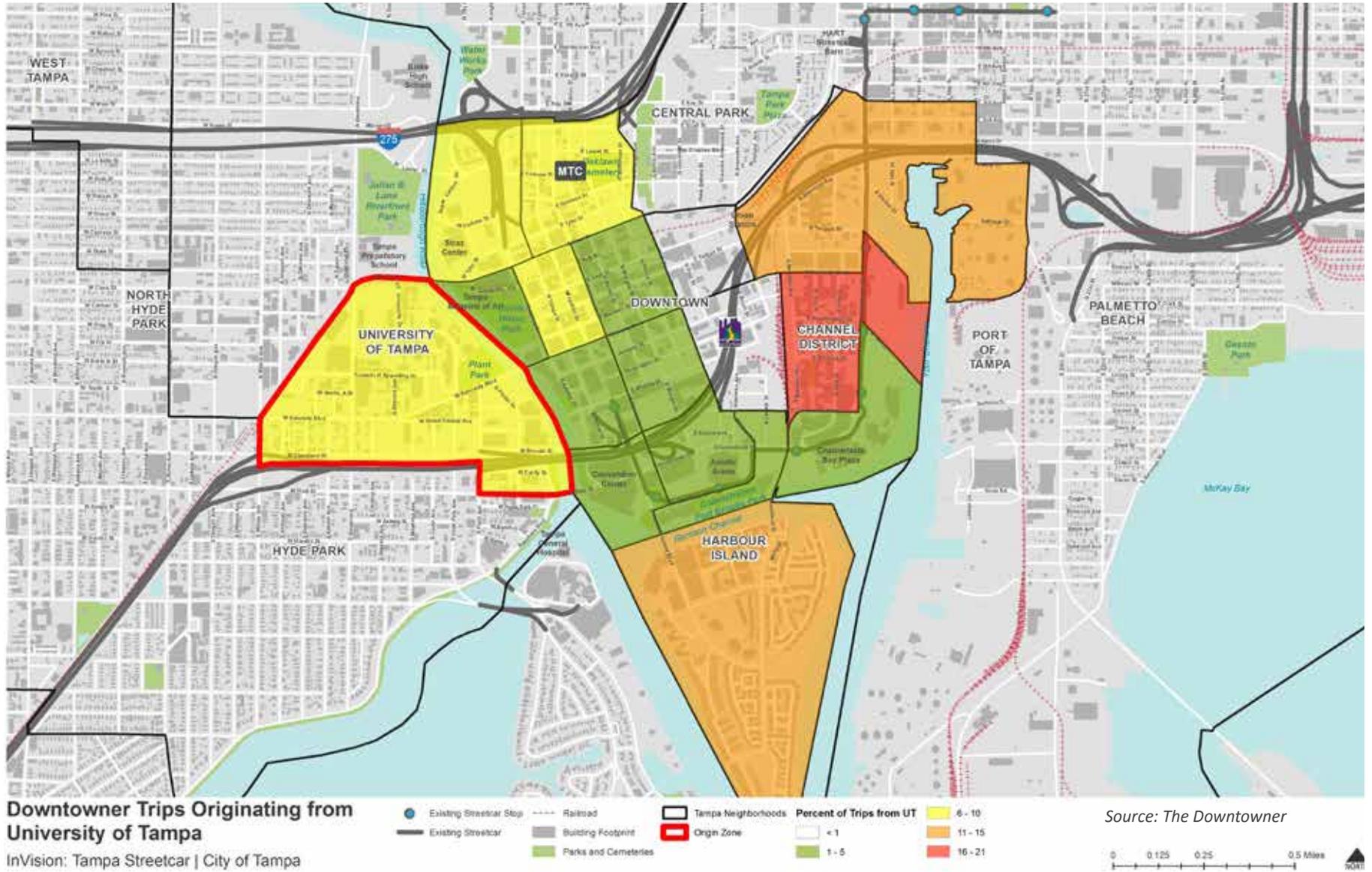


Figure 31. Downtowner Trips Originating from Channel District Center, October 2016-January 2017

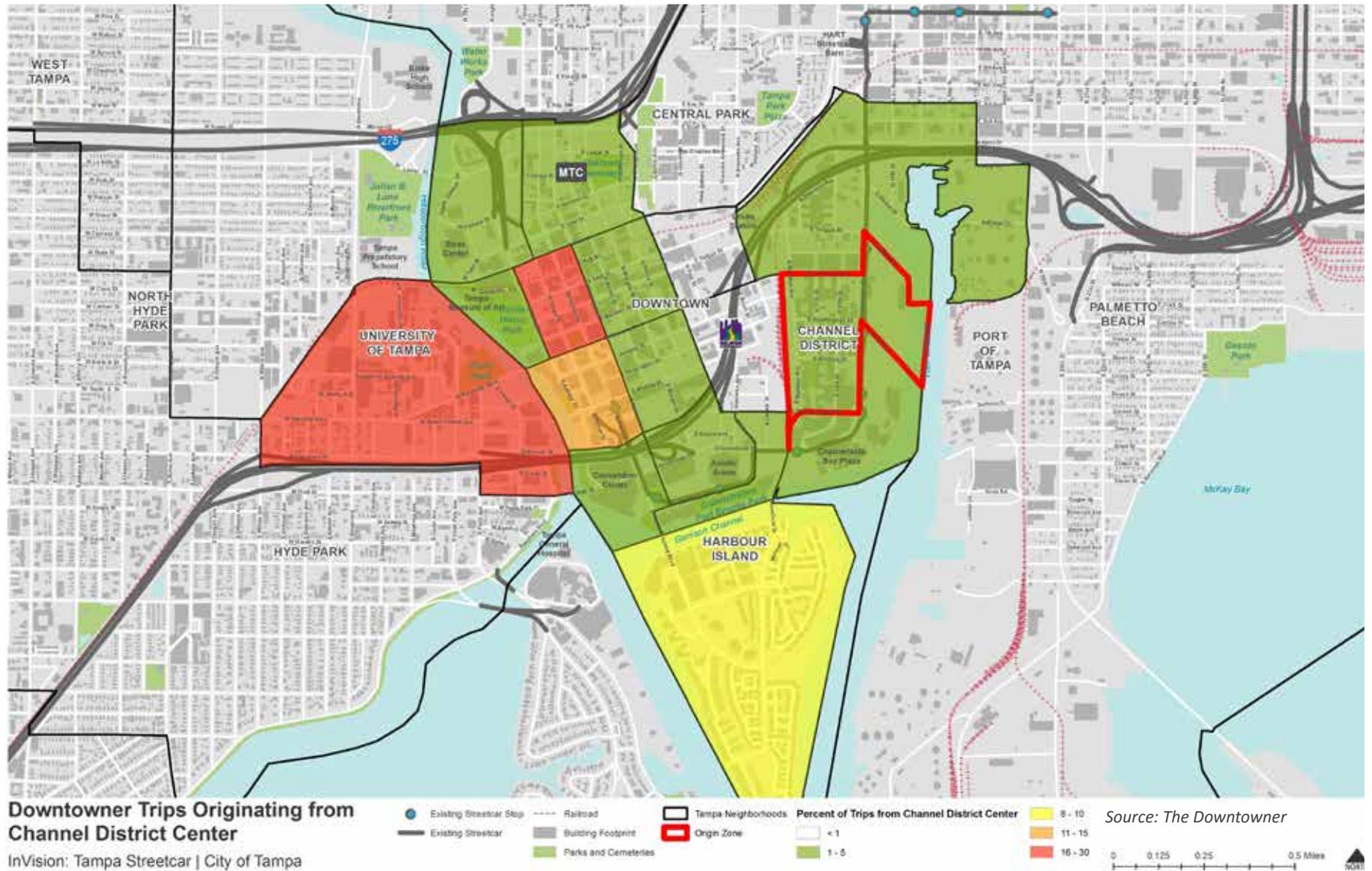


Figure 32. Downtowner Trips Originating from Tampa Theatre, October 2016-January 2017

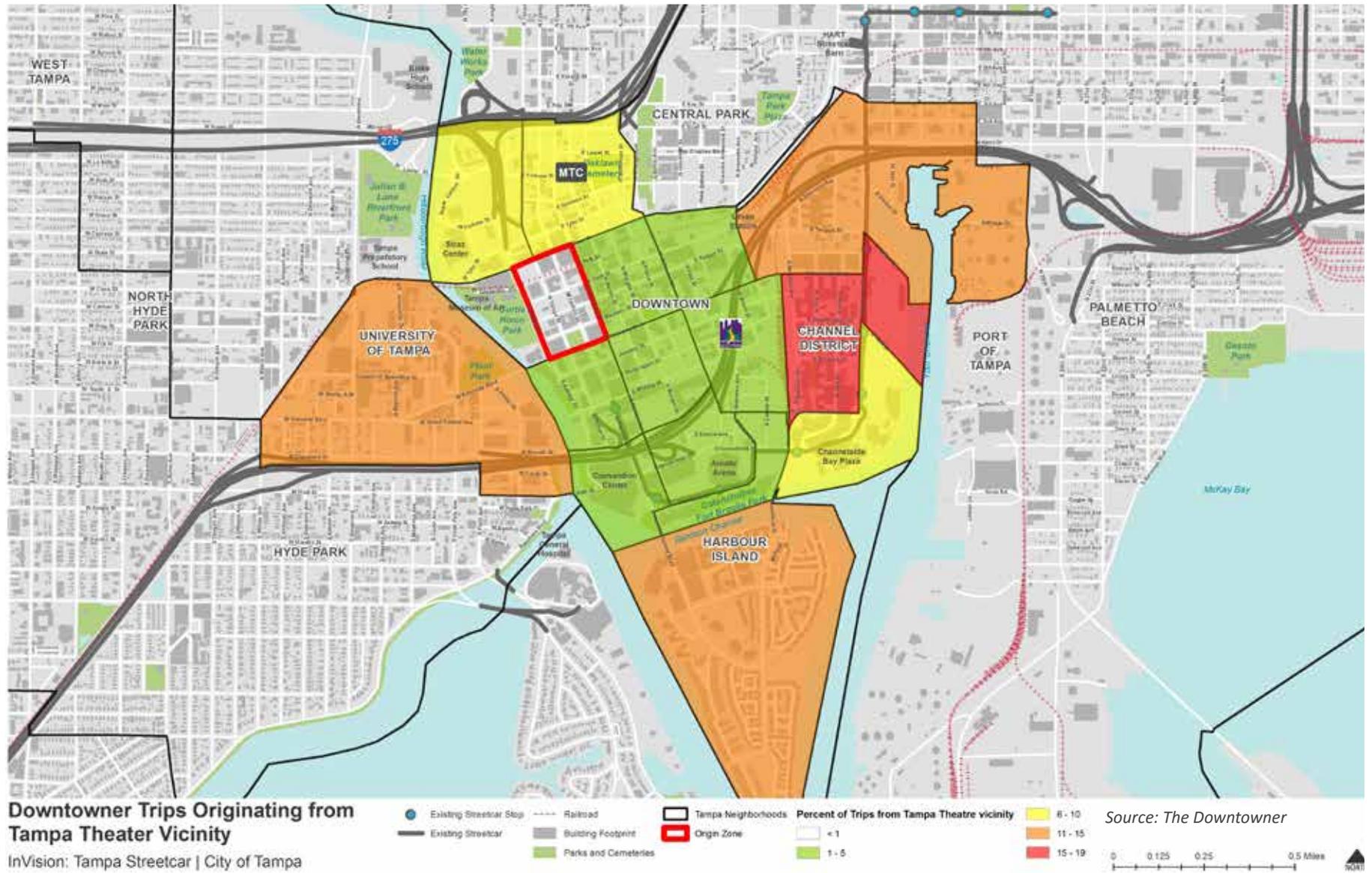


Figure 33. Downtowner Trips Originating from Harbour Island, October 2016-January 2017

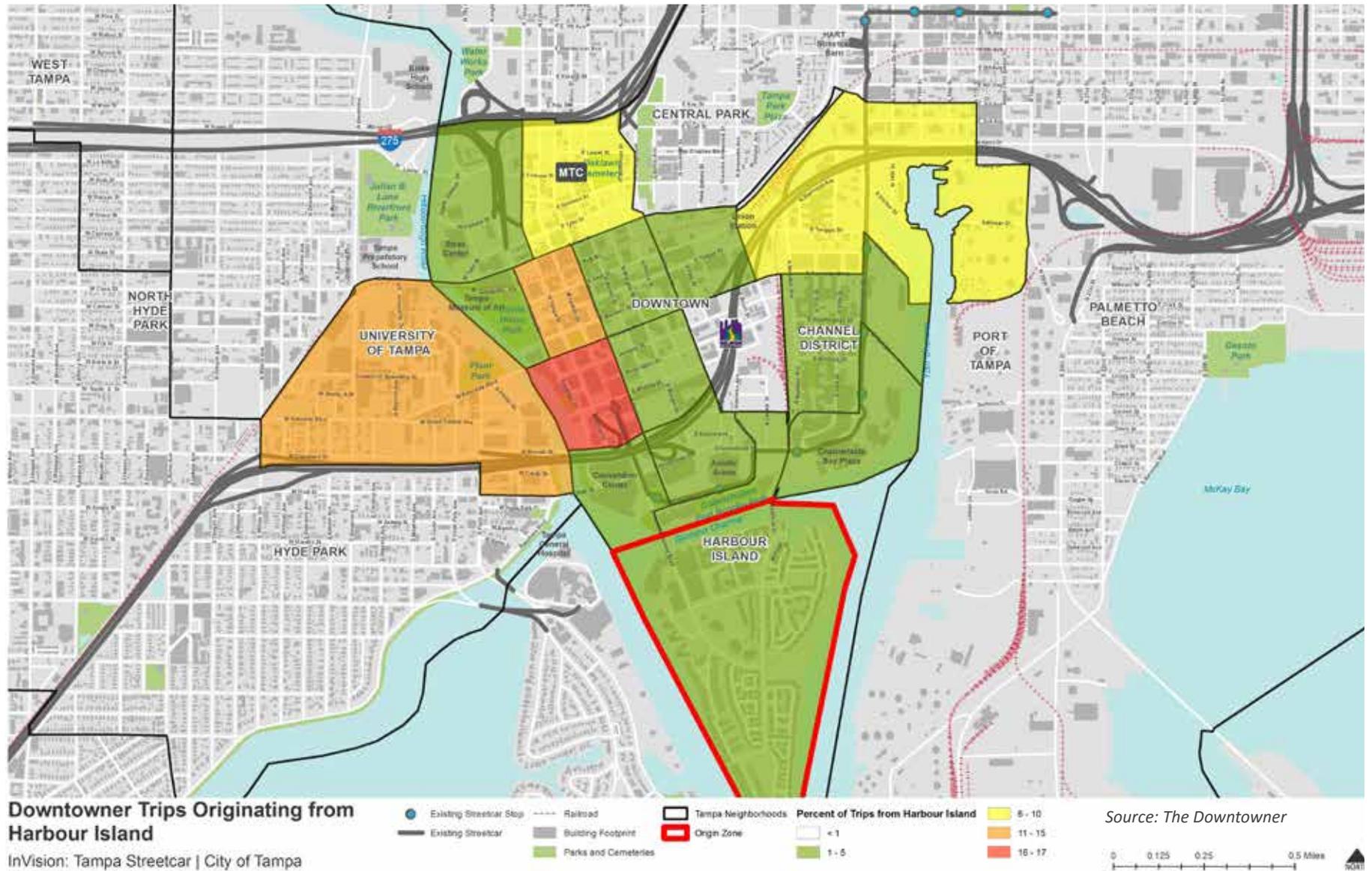
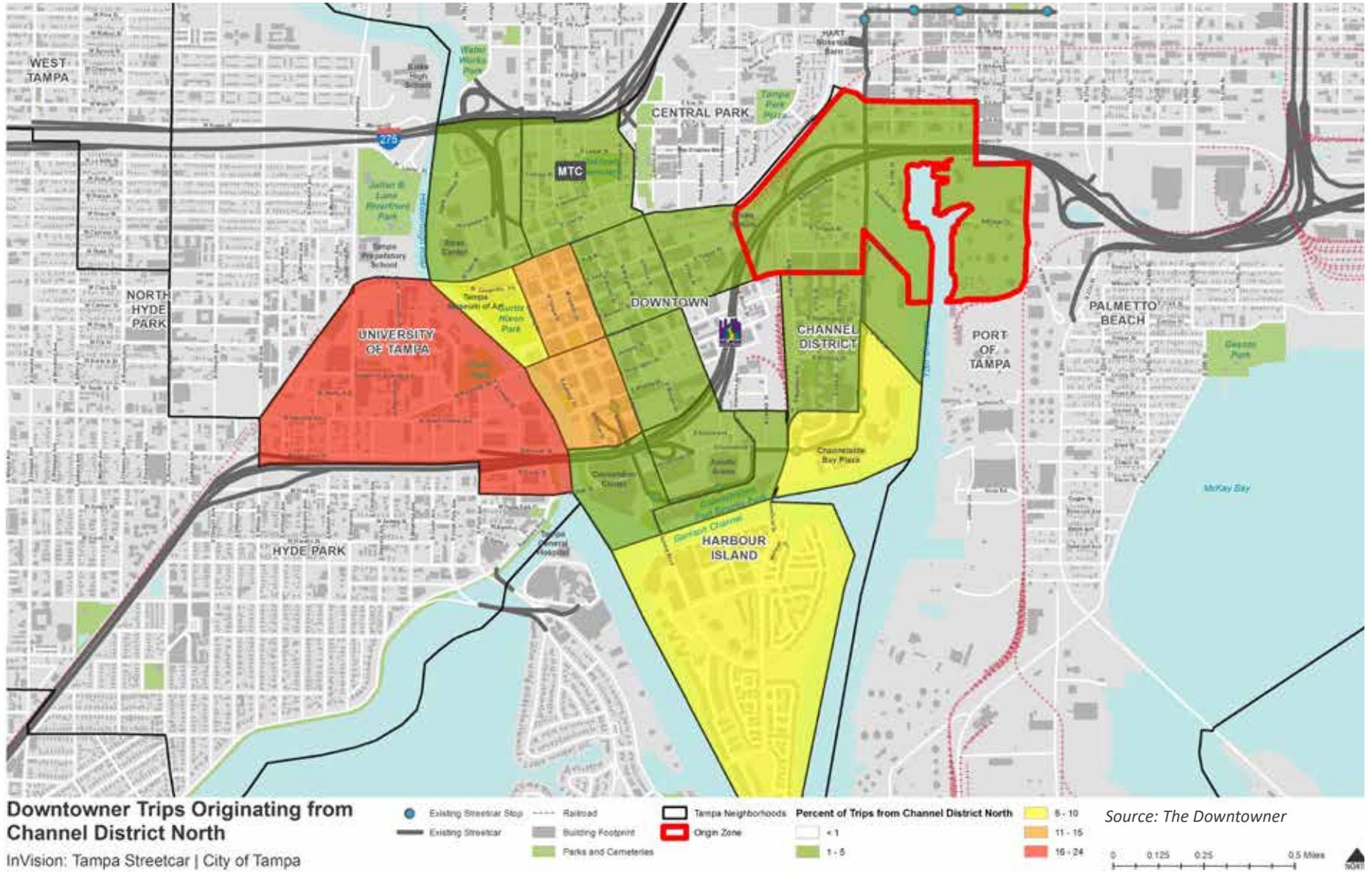


Figure 34. Downtowner Trips Originating from Channel District North, October 2016-January 2017



### Coast Bike Share

Coast Bike Share operates a bike sharing service in Tampa that includes nearly twenty hubs in downtown, and stretches from Ybor City to south of Ballast Point Park (Figure 35). Tabular data gathered from Coast Bike’s Social Bicycle website included O-D coordinates for each bike share trip in the month of December 2016 as well as trip activity “heat maps.”

The tabular and graphic data were analyzed to build an understanding of bike share trip patterns and purpose. In downtown Tampa, Coast Bike Share has an average of approximately 4,600 monthly bike share trips and 121 average weekday trips. It was observed that most trips begin and end in the same area, possibly in the same docking station, indicating that most bike trips purposes are either short, door-to-door trips or recreational. Bike share users also tend to choose routes based on existing, bike-friendly infrastructure. For example, heat maps created by Coast Bike depicting bike share trips between June 1, 2016 and June 20, 2016 show that there was an increase in bike share traffic along East Cass Street after the installation of the cycle track on that corridor (Figure 36 and Figure 37). As shown in Figure 38, a system-wide heat map of the top 10 one-way trips of 2016 shows a concentration of trips traveled along the Riverwalk and Esplanade, stretching from the North Channel District to the Water Works Park.

Figure 35. Coast Bike Share Trips, December 2016



Source: Coast Bike Share

Figure 36. Pre Cycle Track and West River Hubs on Platt Street



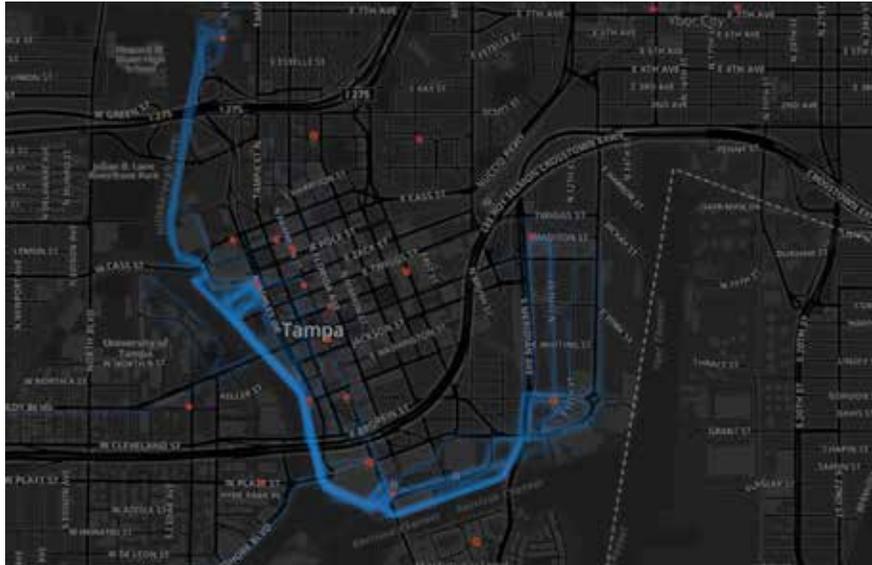
Source: Coast Bike Share

Figure 37. Post Cycle Track and West River Hubs on Platt Street



Source: Coast Bike Share

Figure 38. Top Ten Coast Bike Share Trips, 2016



Source: Coast Bike Share

### Existing Regional Transit

A number of transit options with service to the study area exist to move people to and from regional, state, and national destinations. These services include:

- » Cross Bay Ferry – A six-month pilot program that ended in April 2017, the Cross Bay Ferry connected the Tampa Convention Center to Vinoy Basin in St. Petersburg. The vessel operated seven days a week, but ridership was largely concentrated on the weekends serving diners, shoppers, cultural, recreation and leisure trips to the respective downtowns. This indicates that if the ferry continues to operate, it may appeal more to weekend leisure trips than daily commuters.
- » Amtrak – The Amtrak Union Station is located on Nebraska Avenue. Amtrak provides national passenger rail service to Florida destinations as far south as Miami and destinations as far north

as New York. After traveling from Tampa, the next Amtrak stop is located in Lakeland and could provide a potential regional commuter service connection, if service schedules were suitable.

- » Greyhound – Greyhound buses offer regional, state, and national services with more than 3,800 stations throughout the United States. Regionally, Greyhound offers service to St. Petersburg and offers an “Express Route” to Orlando.
- » RedCoach – RedCoach is a luxury bus line that operates within the state of Florida, providing links to high-demand destinations such as Walt Disney World and Fort Lauderdale. Regionally, the bus line offers service to University of South Florida and has a stop at the Marion Transit Center.
- » Megabus – Megabus is a national bus line that offers service from Tampa to Miami and Orlando. Megabus has a stop at the Marion Transit Center.

### PLANNED TRANSIT (REGIONAL)

The *Regional Transit Feasibility Plan*, funded by FDOT and led by HART, will identify the top regional transit corridors in Hillsborough, Pasco, and Pinellas Counties. The goal is to identify one catalyst project that could be implemented first, followed by other projects to move forward around the region. The projects will be fundable, forward-thinking, and support regional growth. Project management and staff from the Streetcar Study and the Regional Transit Feasibility Plan have been coordinating and sharing information.

Five corridors have been identified, four of which connect the downtown to regional destinations:

- » Westshore;
- » University of South Florida;
- » Brandon;
- » Pasco County; and
- » Pinellas County.

This study is currently in progress, but continued coordination with this decision process will further improve the successfulness of both projects.

## CAPACITY ANALYSIS

An expanded streetcar operating in the study area would likely operate in mixed traffic or on an exclusive guideway within the existing roadway rights-of-way. Roadway volume/capacity (V/C) ratio is a significant factor in evaluating the transportation network's ability to accommodate a streetcar or other transit service. Roadway capacity was determined for each road segment utilizing the existing roadway geometry and the FDOT generalized level of service (LOS) tables. Existing annual average daily traffic (AADT) volumes were obtained for each segment and grown by a conservative growth rate of 0.5 percent per year to estimate future traffic volumes in 2020. Adjusted AADT volumes, obtained from the Hillsborough MPO, were applied to their corresponding road segment and used to calculate an estimated V/C ratio.

### Mixed Traffic Potential

The 2020 future no-build V/C estimates were used to evaluate individual roadway segments' abilities to accommodate a transit service operating in mixed traffic (see Figure 39). A roadway with a V/C ratio greater than 0.9 indicates that existing traffic conditions will likely impact the reliability and performance of additional transit service along the corridor (see Table 10). The analysis revealed that nine segments are anticipated to operate with a V/C greater than 0.9. Those nine segments include portions of: I-275 ramps, Kennedy Boulevard, Channelside Drive, Brorein Street, and other smaller roadways. The analysis indicates that all north/south corridors through Downtown (between Selmon Expressway and Tyler Street) would have additional capacity and could accommodate on-road transit service generally without affect by significant traffic congestion impacts.

### Exclusive Guideway Potential

The feasibility of lane reductions to accommodate exclusive guideway transit service within existing roadways was also evaluated. Transit service operating within a dedicated guideway would be less affected by traffic conditions and thus could provide more reliable service. Roadway capacity was evaluated to assess the impact of a lane reduction in locations where dedicated guideways could be introduced. This was done through an adjustment of the previously calculated, estimated V/C ratio to account for a lane reduction. The roadway segments were then classified into four categories based on their potential to accommodate a dedicated guideway (see Figure 40). Lane reductions along roadways resulting in an anticipated V/C ratio below 0.9 are expected to have less impact on the surrounding roadway network (see Table 11).

The lane reduction assessment indicates that 17 segments would operate with a V/C greater than 1.0, and would have significant impact on traffic operations. Those 17 segments include the nine segments from the previous analysis that were anticipated to operate with a V/C greater than 0.9, as well as segments of Brorein Street, Hyde Park Place, Ashley Drive, and Florida Avenue. Ashley Drive (between Selmon Expressway and Tyler Street) is the only north-south roadway for which a lane reduction would result in over capacity. However, several roadways within downtown are anticipated to operate below capacity even after a lane reduction. These segments include portions of Florida Avenue, Morgan Street, Kennedy Boulevard, and Ashley Drive. It should be noted that this preliminary analysis does not account for traffic diversions that are likely to result from reductions in roadway capacity, and does not evaluate peak travel time conditions.

Table 10. Roadway Volume/Capacity (V/C) Thresholds

V/C	Ability to Accommodate Transit Vehicle in Mixed Traffic	Anticipated Impacts to Traffic Operations
< 0.6	Able to accommodate	No significant impacts anticipated.
0.6 - 0.9	Able to accommodate	Likely to have significant impacts to traffic operations.
> 0.9	Unable to accommodate	Roadway too congested to provide reliable streetcar service.

Source: Kimley-Horn and Associates

Figure 39. Projected 2020 Roadway Volume/Capacity (V/C)

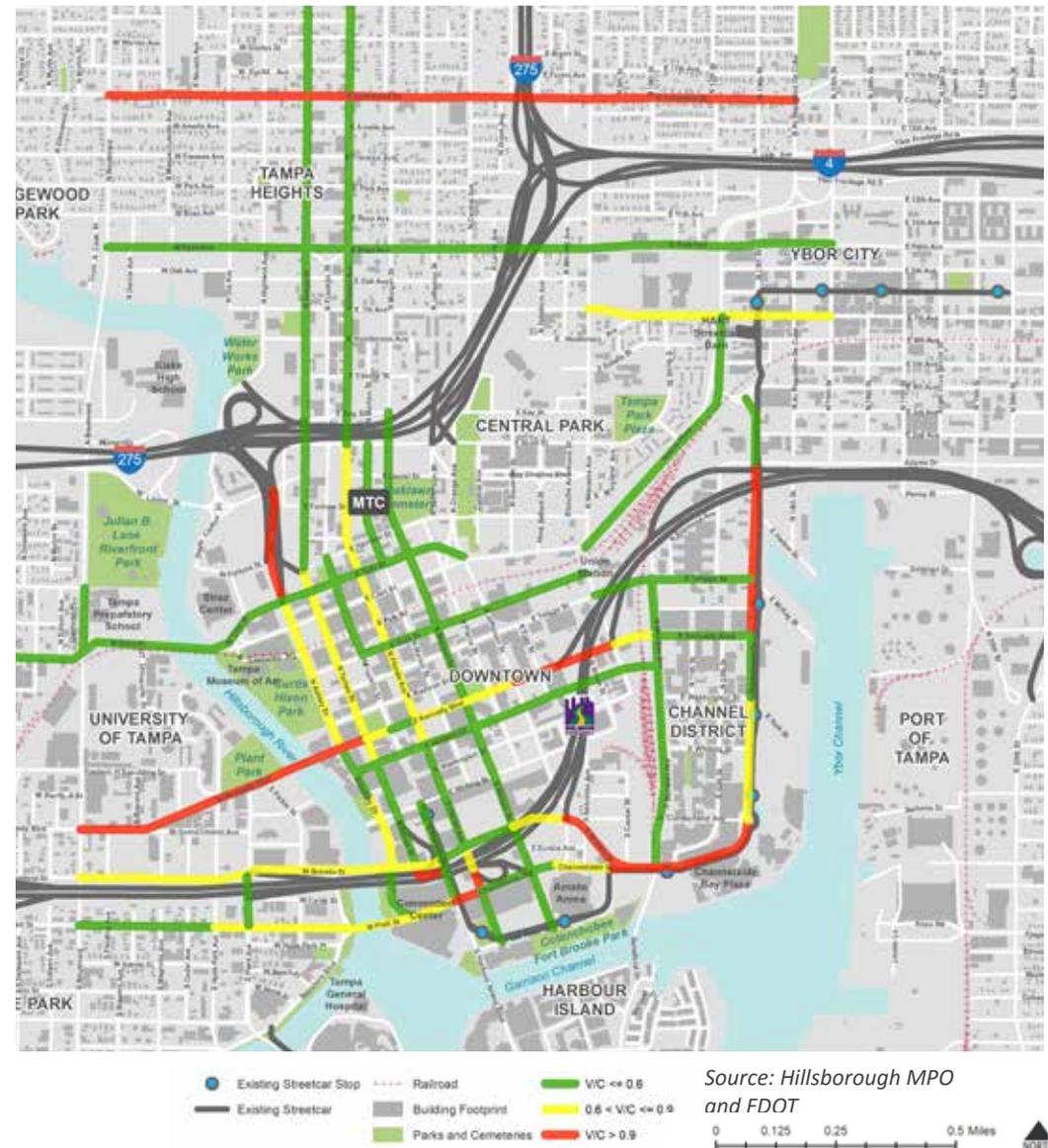


Table 11. Adjusted Roadway Volume/Capacity (V/C) Thresholds

Adjusted V/C	Ability to Accommodate Streetcar on Exclusive Guideway	Anticipated Impacts to Traffic Operations
< 0.9	Yes	No significant adverse impacts.
0.9 - 1.0	Yes	Likely to result in significantly reduced level of service (LOS).
1.0 - 1.2	Unlikely – not recommended	Significantly reduced LOS and will result in trip diversion due to congestion.
> 1.2	Not recommended	Roadway will fail with lane reduction.

Source: Kimley-Horn and Associates

Figure 40. Adjusted 2020 Roadway Volume/Capacity (V/C)



## 4. EVALUATION PLAN

This section outlines the evaluation methodology and criteria that will be used to screen alignment options prepared during Phase 1 of the project. Each of the alignments will be rated on a scale of 1 to 5 (low to high), based on several measures specific to each of the evaluation categories. The evaluation of the alignments will focus on how well they each address the purpose and need statements presented above, as well as how they each perform against a set of performance and impacts criteria (such as cost effectiveness and environmental impacts). The intent of this evaluation process is to identify and select a preferred alignment that will then be refined and scrutinized at a more detailed level in project development.

### 4.1 Purpose and Need Categories

The purpose and need statements identified define general objectives for modernization and extension of the Tampa Historic Streetcar, frame the characteristics of an effective service, and guide the selection and evaluation process. As such, these purpose and need statements will be used as the first set of categories by which the alignments will be rated:

- » Connect Downtown Districts
- » Serve Diverse Travel Markets
- » Improve First/Last Mile Service
- » Support Economic Development
- » Expand Sustainable Transportation Options

The measures identified for each of the five purpose and need evaluation categories are shown in Table 12.

### 4.2 Performance and Impact Categories

The second set of evaluation categories and measures typically reflect the criteria evaluated in an environmental review process or alternatives analysis. These evaluation categories include population and employment per

Table 12. Purpose and Need Evaluation Categories and Measures

Category	Measure
Connect Downtown Districts	Serves Downtown core
	Serves emerging subdistricts
Serve Diverse Travel Markets	Serves the greatest population/employment within 1/4 mile (2020) - extension only
	Provides access for transit-dependent population within 1/4 mile
	Connects major destinations and parks within 1/4 mile
Improve First/Last Mile Service	Provides connection to existing regional transit hubs (MTC)
	Provides connection existing regional and local transit services
	Provides connection to potential new regional transit hubs
Support Economic Development	Supports population/employment with 1/4 mile (2040) - extension only
	Provides access to developments that are under construction/planned/proposed within 1/4 mile
	Serves areas with potential for transit-induced development
Expand Sustainable Transportation Options	Enhances connections to local mobility options

track mile, costs, cost-effectiveness factors, constructibility and operational constraints, traffic and parking impacts, and environmental and community impacts.

- » Population & Employment Served. Understanding the potential ridership market for streetcar is a key consideration. Population and employment projections for 2020 and 2040 will be evaluated by alignment track miles. This can be used approximate and compare the potential transit market for each alignment.
- » Capital & Operating Costs. Capital and annualized operating and maintenance (O&M) costs will be estimated at a conceptual

planning/engineering level using 2017 dollars. The cost estimates will include costs associated with the extension of service only.

- » **Cost Effectiveness.** The cost-effectiveness of a transit system is an important indicator of success and can be measured using several different factors. Capital costs are the obvious inputs, which range widely from one service to another. The estimated costs will be applied to compare alignment options, based on capital costs per potential track miles and the annualized capital and O&M costs per rider.
- » **Constructibility/Operational Constraints.** Engineering factors affecting the feasibility of locating a streetcar along specific alignments will also be identified and evaluated. Key constructibility factors are critical not only to implementation, but also to the successful adherence of transit construction to the goals, schedule, and budget determined in various funding and grant agreements early on in the process. The characteristics that will be used to evaluate the alignments are specific to the engineering challenges that would arise for an expanded streetcar system.
- » **Traffic & Parking Impacts.** Impacts to roadway congestion, understanding the potential for a dedicated guideway along alignments, and on-street parking and intersection impacts will also be evaluated.
- » **Environmental and Community Impacts.** Environmental, cultural, and social impacts of expanding the Tampa Streetcar will be the final consideration in choosing a preferred alignment. These impacts are multidimensional and address the potential direct, indirect, and cumulative influence of factors such as noise and vibration, potential impact to historic districts.

Table 13. Performance & Impact Evaluation Categories and Measures

Category	Measure
Population & Employment Served	Population/employment within 1/4 mile per track mile (2020)
	Population/employment within 1/4 mile per track mile (2024)
Capital & Operating Costs	Total capital cost (2017\$) - mid-range (extension & new vehicle cost only)
	Annual O&M costs (2017\$) - extension only
Cost Effectiveness	Capital cost (2017\$) per track mile
	Annualized capital & O&M cost (2017\$) per rider (2020)
Constructability /Operational Constraints	Avoids CSX railroad crossings
	Avoids river crossings
	Avoids Esplanade crossing
	Minimizes or avoids other constraints that would affect streetcar operations
Traffic & Parking Impacts	Avoids or minimizes impacts to major utilities
	Minimizes or avoids increases in roadway congestion (2020 existing roadway capacity)
	Provides potential for dedicated guideway based on adjusted roadway capacity
	Avoids or minimizes reduction in on-street parking
Community & Environmental Impacts	Avoids or minimizes potential for intersection failure
	Serves Environmental Justice (EJ) populations with minimal impacts
	Minimizes impacts to business access
	Minimizes or avoids impacts to noise/vibration-sensitive uses
	Minimizes potential impacts to historic districts
Community & Environmental Impacts	Avoids potential impacts to parklands or other Section 4(f) resources

## 5. SOURCES

### CITY OF TAMPA

- » West River Redevelopment Plan. <https://www.tampagov.net/west-river-redevelopment-plan>
- » Central Park Community Redevelopment Area. <https://www.tampagov.net/economic-and-urban-development/programs/community-redevelopment-areas/central-park>
- » Perry Harvey, SR. Park. <https://www.tampagov.net/parks-and-recreation/improvements/completed/perry-harvey-sr>
- » Julian B. Lane Riverfront Park. <https://www.tampagov.net/julian-b-lane-riverfront-park>

### TAMPA BAY BUSINESS JOURNAL

- » “Tampa Housing Authority Picks Developer for Massive West River Project.” <http://www.bizjournals.com/tampabay/news/2016/06/29/tampa-housing-authority-picks-developer-for.html>
- » “Vinik-Cascade Team Reveals Vision for Channelside Bay Plaza Redevelopment (Renderings).” <http://www.bizjournals.com/tampabay/news/2016/09/20/vinik-cascade-team-reveals-vision-for-channelside.html>
- » “Historical 7th Avenue in Ybor City recognized.” <http://www.bizjournals.com/tampabay/stories/2008/10/06/daily28.html>
- » “Tampa’s old guard wary of over-pirating Gasparilla.” <http://www.bizjournals.com/tampabay/print-edition/2015/01/30/tampas-old-guard-wary-of-over-pirating-gasparilla.html>
- » “Developers planning a 4-star hotel in Ybor.” <http://www.bizjournals.com/tampabay/news/2014/10/28/developers-planning-a-4-star-hotel-in-ybor.html>
- » Tampa Bay Business Journal, “Tampa Bay Crane Watch”, <http://www.bizjournals.com/tampabay/maps/crane-watch>
- » “Hotel with ground-floor retail planned for Channel district (Renderings).” <http://www.bizjournals.com/tampabay/news/2016/12/19/hotel-with-ground-floor-retail-planned-for-channel.html>

- » “With 52-story tower in downtown Tampa in the works, Feldman ramps up hiring.” <http://www.bizjournals.com/tampabay/news/2016/09/26/with-52-story-tower-in-downtown-tampa-in-the-works.html>
- » “Developer revives plans for mixed-use project near Oxford Exchange (Rendering).” <http://www.bizjournals.com/tampabay/news/2016/03/28/developer-revives-plans-for-mixed-use-project-near-oxford-exchange.html>
- » “Here’s when the Tribune’s building in downtown Tampa will be razed.” <http://www.bizjournals.com/tampabay/blog/morning-edition/2016/06/heres-when-the-tribunes-building-in-downtown-tampa.html>

### TAMPA BAY TIMES

- » “The Plan by Jeff Vinik and His Partners to Reshape Tampa Still Lacks One Key Thing: A Name.” <http://www.tampabay.com/news/business/realestate/the-plan-by-jeff-vinik-and-his-partners-to-reshape-tampa-still-lacks-one/2286503>
- » “The Heights Project in Tampa to Open next Year with Apartments, Market and Restaurants.” <http://www.tampabay.com/news/business/realestate/the-heights-project-in-tampa-to-open-next-year-with-apartments-market-and/2281748>
- » “COTANCHOBEE FORT BROOKE PARK”, <http://www.tampabay.com/things-to-do/destination-detail/cotanchobee-fort-brooke-park/5735>
- » “Gasparilla parade’s 100th edition marked by mostly behaved revelry”, <http://www.tampabay.com/news/gasparilla-parades-100th-edition-marked-by-mostly-behaved-revelry/2215951>
- » Tampa Bay Times, “Businesses hunt for Gasparilla booty”, <http://www.tampabay.com/news/business/businesses-hunt-for-gasparilla-booty/1212337>
- » “Tampa looks to sell city block to New Orleans developer HRI Properties for \$7.5 million.” <http://www.tampabay.com/news/business/realestate/tampa-looks-to-sell-city-block-to-new-orleans-developer-hri-for-75-million/2295721>
- » “Jeff Vinik plans to clear the rooftops of his Tampa development by going underground.” <http://www.tbo.com/news/business/jeff-vinik-plans-to-clear-the-rooftops-of-his-tampa-development-by-going-underground-20160713/>
- » “Development puts focus on area between Channelside, Ybor.” <http://www.tbo.com/news/politics/development-puts-focus-on-area-between-channelside-ybor-20150607/>
- » “Water Works Park takes shape as first deadline approaches.” <http://www.tbo.com/news/politics/water-works-park-takes-shape-as-first-deadline-approaches-20140401/>

## HILLSBOROUGH COUNTY

- » Plan Hillsborough, “Transportation Needs of Disadvantaged Populations: Where, When, and How?” <http://www.planhillsborough.org/transportation-disadvantaged-service-plan/>
- » Plan Hillsborough, Imagine 2040: Tampa Comprehensive Plan. <http://www.planhillsborough.org/city-of-tampa-2040-comprehensive-plan/>

## 83 DEGREES MEDIA

- » “Development News.” <http://www.83degreesmedia.com/devnews/>
- » “What’s next in Downtown Tampa? Rebirth of West Bank of Hillsborough River.” <http://www.83degreesmedia.com/features/westbank072616.aspx>

## OTHER

- » Tampa Downtown Partnership, “Tampa Downtown Partnership Unveils Biennial Survey Results.” <https://www.tampadowntown.com/news/2016-workforce-residential-study/>
- » Tampa Bay Transportation Management Area (TMA) Profile. <https://www.pinellascounty.org/mpo/TMA/TMAProfile.pdf>
- » Forbes, “Why Bill Gates And Jeff Vinik Are Investing Billions To Build An Ecosystem In Tampa.” <https://www.forbes.com/forbes/welcome/?toURL=https://www.forbes.com/sites/amyguttman/2016/11/08/why-bill-gates-and-jeff-vinik-are-investing-billions-to-build-an-ecosystem-in-tampa/&refURL=https://www.google.com/&referrer=https://www.google.com/>
- » Florida Politics “USF’s Downtown Tampa Medical School Takes a \$2 Million Haircut in Final Budget Offer.” <http://floridapolitics.com/archives/237371-usfs-downtown-tampa-medical-school-takes-2-million-haircut-final-budget-offer>
- » Strategic Property Partners. <http://spprealestate.com/>
- » Pure Properties, “The Pearl at The Heights.” <http://purepropertiesgroup.com/project/the-pearl-at-the-heights/>
- » Port Tampa Bay, “Vision Plan.” Port Tampa Bay’s Channel District Vision. <http://www.ptbchannelside.com/>
- » Arts Council of Hillsborough County. <http://tampaarts.org/directories/gallery-aia/>
- » Ybor City Museum. <http://www.ybormuseum.org/>

- » CAMLS. <https://caml-s.us.org/>
- » Friends of the Riverwalk. <http://www.thetampariverwalk.com/plan-your-day.aspx>
- » AIA Florida. <http://www.aiaflatop100.org/Current-Standings.cfm>
- » University of South Florida. <http://health.wusf.usf.edu/post/usf-unveils-downtown-tampa-med-school-design#stream/0>
- » Health News Florida, “USF Unveils Downtown Tampa Med School Design.” <http://www.skyscrapercity.com/showthread.php?t=1958547>
- » Emporis, “AER in the Arts District”, <https://www.emporis.com/buildings/1217987/aer-in-the-arts-district-tampa-fl-usa>
- » Carter, “83 DEGREES | CONSTRUCTION BEGINS ON NEW APARTMENT TOWER IN DOWNTOWN TAMPA.” <http://www.carterusa.com/app-latest-news/83-degrees-construction-begins-on-new-apartment-tower-in-downtown-tampa>