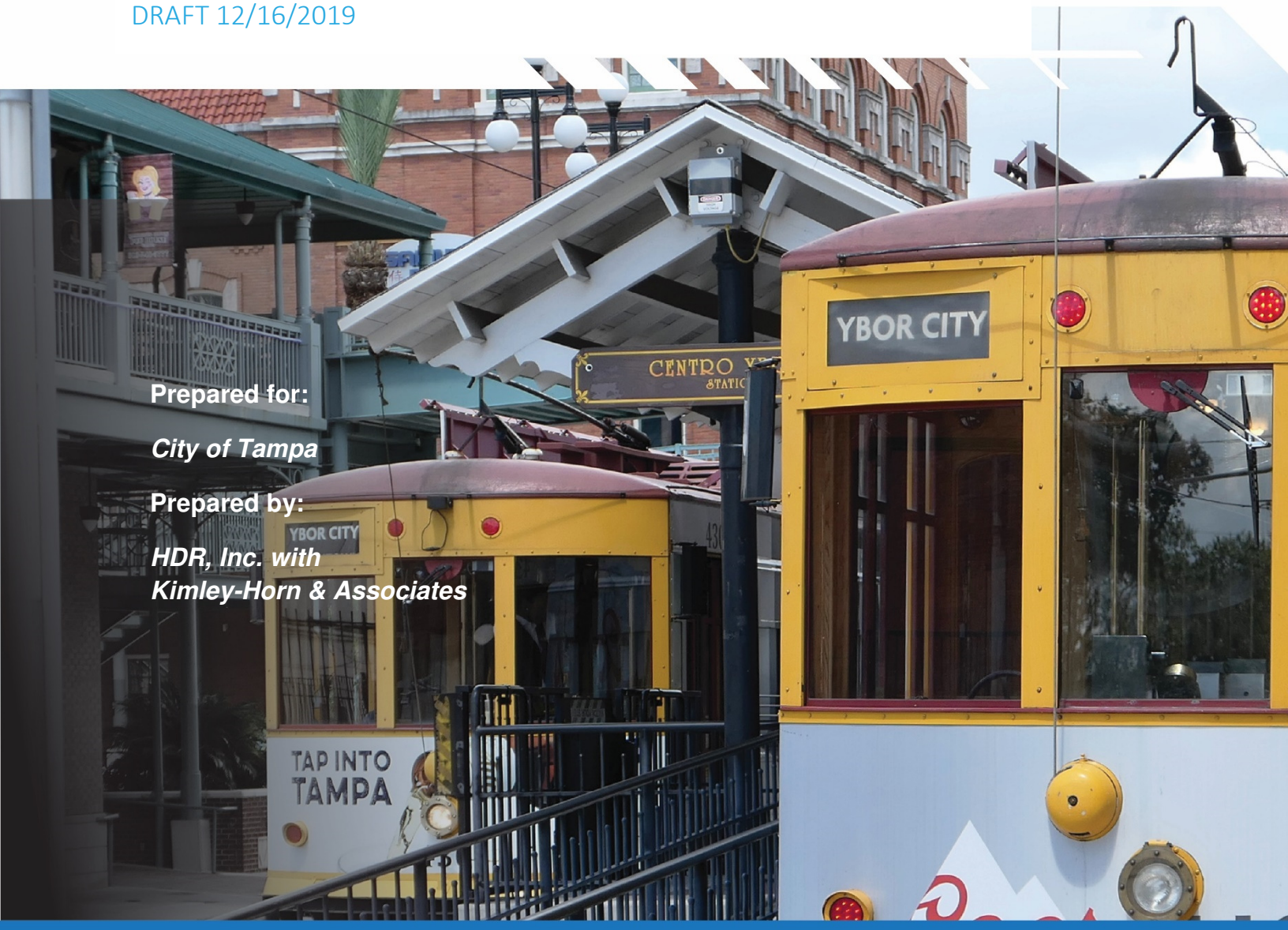
InVision: TAMPA STREETCAR
TRANSFORMING TAMPA'S TRANSIT

TAMPA MODERN STREETCAR: ATTACHMENT 1: NEPA DOCUMENTED CATEGORICAL EXCLUSION

DRAFT 12/16/2019



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A. Project Description

Project Overview

The City of Tampa is completing project development activities for the InVision Tampa Streetcar project. These activities are designed to identify improvements to the Tampa Historic Streetcar System to better serve the mobility needs of residents, workers, visitors, and students in Downtown Tampa, Ybor City, Channel District, and surrounding urban neighborhoods. The project is being led by the City of Tampa in partnership with the Florida Department of Transportation (FDOT) and the Hillsborough Area Regional Transit Authority (HART). Project activities include intensive public engagement and close coordination with other local and regional transit initiatives, including the Tampa Bay Area Regional Transportation Authority (TBARTA) Regional Transit Feasibility Plan.

Project activities have proceeded under two phases. During the first phase, the project team completed assessments of land use and transportation conditions in the study area, prepared a purpose and need statement, and evaluated multiple alignments for the extension of the system through Downtown and surrounding urban neighborhoods. These efforts, including a series of general public and stakeholder meetings and workshops held in the spring and fall of 2017, resulted in the identification of two north/south-oriented alignments as the best performing options for advancement into the second phase of the study. The first phase also resulted in a recommendation to improve service on the existing streetcar alignment between Ybor City, Channel District, Water Street, and the Tampa Convention Center. Project objectives prepared during the first phase call the full alignment—the existing system plus the extension—to be designed to provide a "one seat" trip, maximize exclusive transit guideway operations, minimize community and environmental impacts, and offer high levels of service with full-day and evening operations and 10- to 15-minute service frequency.

During the second phase of the study, the two north/south-oriented alignments were evaluated in greater detail and a final preferred alignment was selected, and additional analyses were conducted to determine preferences for vehicle technology, guideway configurations, stop locations and design concepts, and modernization improvements along the existing system, including improvements to the existing vehicle maintenance and storage facility (VMSF) to accommodate modern streetcar vehicles. For more detailed information on the alignment option evaluation and selection process, refer to the full report—Definition & Evaluation of Alignment Options Report—on the City of Tampa's InVision: Tampa Streetcar project website at www.tampagov.net/streetcar.

The preferred alternative serves as the basis for the assessment of environmental impacts, preparation of ridership and cost estimates, and the preparation of project funding and implementation plan.

Current Tampa Historic Streetcar System

The current Tampa Historic Streetcar System is a 2.7-mile-long, fixed guideway transit service connecting destinations in Downtown Tampa, Channel District, and Ybor City. Since the start of revenue service on Phase I (Ybor City to Convention Center) in October 2002 and opening of the Phase II-a (Convention Center to

Whiting Street) in December 2010, the system has provided connections between Ybor City and key visitor destinations and event venues. The system currently connects the Tampa Aquarium, Tampa Bay History Center, Amalie Arena, and the Tampa Convention Center.

In recent years, ridership on the existing system has been lower than anticipated due to several factors, including limited hours of operation, low service frequency, and lack of connectivity to important transit trip attractors and generators in the Downtown Core, including commercial and governmental offices, multifamily development, the Tampa Convention Center, the Marion Transit Center, and cultural and entertainment venues.

In October 2018, supported by a three-year FDOT grant, HART initiated service improvements that have resulted in significant increases in ridership. These improvements, which include fare-free service, longer operation hours, and greater service frequency, have attracted more than 180,000 additional riders in the first four months of implementation, nearly tripling ridership over the same period the previous year.

With additional improvements, introduction of accessible, higher capacity vehicles, and extension through the Downtown core, the service has the potential to become an attractive transportation option for a broader cross-section of downtown residents, workers, students, and visitors, as well as serve as a catalyst for reinvestment and economic development.

Purpose & Need

A purpose and need statement was prepared during the first phase of the project and served as the basis for defining and evaluating modernization and alignment options. The purpose of the Tampa Streetcar project is to serve the mobility needs of residents, workers, visitors, and students in Downtown Tampa, Ybor City, Channel District, and surrounding urban neighborhoods, both now and in the future (2040). The purpose and need statement, shaped by extensive public and stakeholder input, identifies the following problems and opportunities to be addressed through the introduction of enhanced transit service in the study area.

CONNECT DOWNTOWN CENTERS

Tampa's downtown has undergone a dramatic transformation in the past decade. The downtown core, Channelside, and north Harbour Island are now home to nearly 10,000 residents and another 40,000 people reside in revitalizing districts surrounding the core, including Central Park, Ybor City, North Hyde Park, Grand Central, and Tampa Heights. The number of employees in the study area has increased to around 100,000 with an additional 34,000 projected to be added between the years 2020 and 2040. But as activity levels have increased, travel within and between downtown destinations has become increasingly time-consuming, costly, and inconvenient. Single occupancy vehicle travel is difficult given traffic congestion, diminished parking availability, and increased parking costs. Distance and physical barriers make walking an unattractive option for all but very short trips, particularly during hot weather. And although the existing streetcar connects some key destinations and other modes offer options, many important destinations are beyond walking distance of the system and the capacity and range of existing transit services is limited.

SERVE DIVERSE TRAVEL MARKETS

As the traditional center of employment, governmental services, culture and history, and entertainment, downtown Tampa serves a broad range of users from across the Tampa Bay region. Downtown residents, workers, and frequent visitors travel to and within the downtown core 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. The service could meet demand of transit-dependent populations in downtown-adjacent neighborhoods as well as meet the needs of downtown's growing residential population, event and venue patrons, conventioneers, and downtown workers.

IMPROVE FIRST/ LAST MILE SERVICE

Regional transportation modes serving downtown Tampa have limited first/last mile mobility support options. And while these services cater to a wide range of users and geographical reaches, there is no one unifying service that addresses the first/ last mile mobility needs of a large numbers of daily regional transit commuters and residents seeking seamless local connections. An intermediate-capacity, scheduled service that allows for frequent and efficient transfers to and from regional transit modes is missing in the service area. Such a service can complement existing bike sharing, ride hailing, and limited capacity public transit services like the In-Towner and Downtowner.

SUPPORT ECONOMIC DEVELOPMENT

Investment in large-scale, multi-block, mixed use projects, including Water Street, 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 downtown 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 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 barriers to walking, existing travel within and between the downtown core and emerging development areas is time-consuming and inconvenient. A core transit service linking planned population and employment concentrations will help bridge the distances across downtown, and connect downtown adjacent subdistricts more directly to destinations, amenities, and activities focused in the downtown core.

EXPAND SUSTAINABLE TRANSPORTATION OPTIONS

Without improved local transit options, downtown Tampa's long-term sustainability and competitiveness will be diminished. Several factors limit the potential to improve access and mobility by automobile travel—downtown's location on a peninsula creates natural access and mobility challenges, roadway and parking capacity is limited, and the distance between regional transit hubs, subdistricts, and destinations makes pedestrian travel an impractical alternative for mid-range local trips. A core transit service with the potential to serve internal trips effectively, bypass peak hour and event-related congestion, integrate with on-demand and private ride-hailing services, and leverage the presence of regional transit connections and parking resources has the potential to support City goals for a more sustainable, livable, and energy-efficient future.

Project Elements

The project consists of the following elements:

1) replacement of the existing replica streetcar vehicles with modern streetcar vehicles;
2) construction of a 1.3-mile fixed guideway with overhead power within existing rights-of-way from the western terminus of the existing system through the core of Downtown Tampa to Tampa Heights;
3) construction of stops along the extension guideway;
4) modifications to the existing 2.7-mile alignment guideway, power system, and stops to support modern streetcar operations; and
5) modifications to the existing VMSF to serve new vehicles.

A map indicating the location of improvements is included as **Figure 1**. Further description of the project elements is provided below.

VEHICLE TECHNOLOGY

Modern streetcar vehicles were selected as the preferred vehicle technology for operations along the existing system and proposed extension. The modern streetcar provides the highest-capacity vehicle of the options considered. The configuration of the modern streetcar, with multiple, wide doors and level-boarding heights, would facilitate easy access by the greatest share of the population, including those with mobility challenges. With many portions of the route in a dedicated guideway, a modern streetcar would be able to move large numbers of people while minimizing constraints posed by traffic congestion. The modern streetcar's larger passenger capacity makes it the most efficient of the options in terms of cost per rider. In a rapidly-growing urban center like Tampa, this capacity provides the greatest degree of system flexibility for meeting mobility demands on a day-to-day basis, and over the long term.

EXTENSION ALIGNMENT

The proposed extension travels 1.3 miles north from Downtown to Palm Avenue within existing rights-of-way. The alignment is proposed as a north/south couplet pairing Florida Avenue and Tampa Street. The alignment begins near the existing streetcar terminus at Whiting Street and Franklin Street. From the existing track on Franklin Street, the northbound track extension turns east at Brorein Street, then turns north at Florida Avenue to extend through the Downtown Core and Tampa Heights to Palm Avenue. At Palm Avenue, the alignment turns west and travels two blocks before turning south onto Tampa Street. The southbound alignment runs along Tampa Street to Whiting Street. At Whiting Street, the alignment turns east to link back to the existing downtown streetcar terminus at the Whiting Street Station (see **Figure 1**).

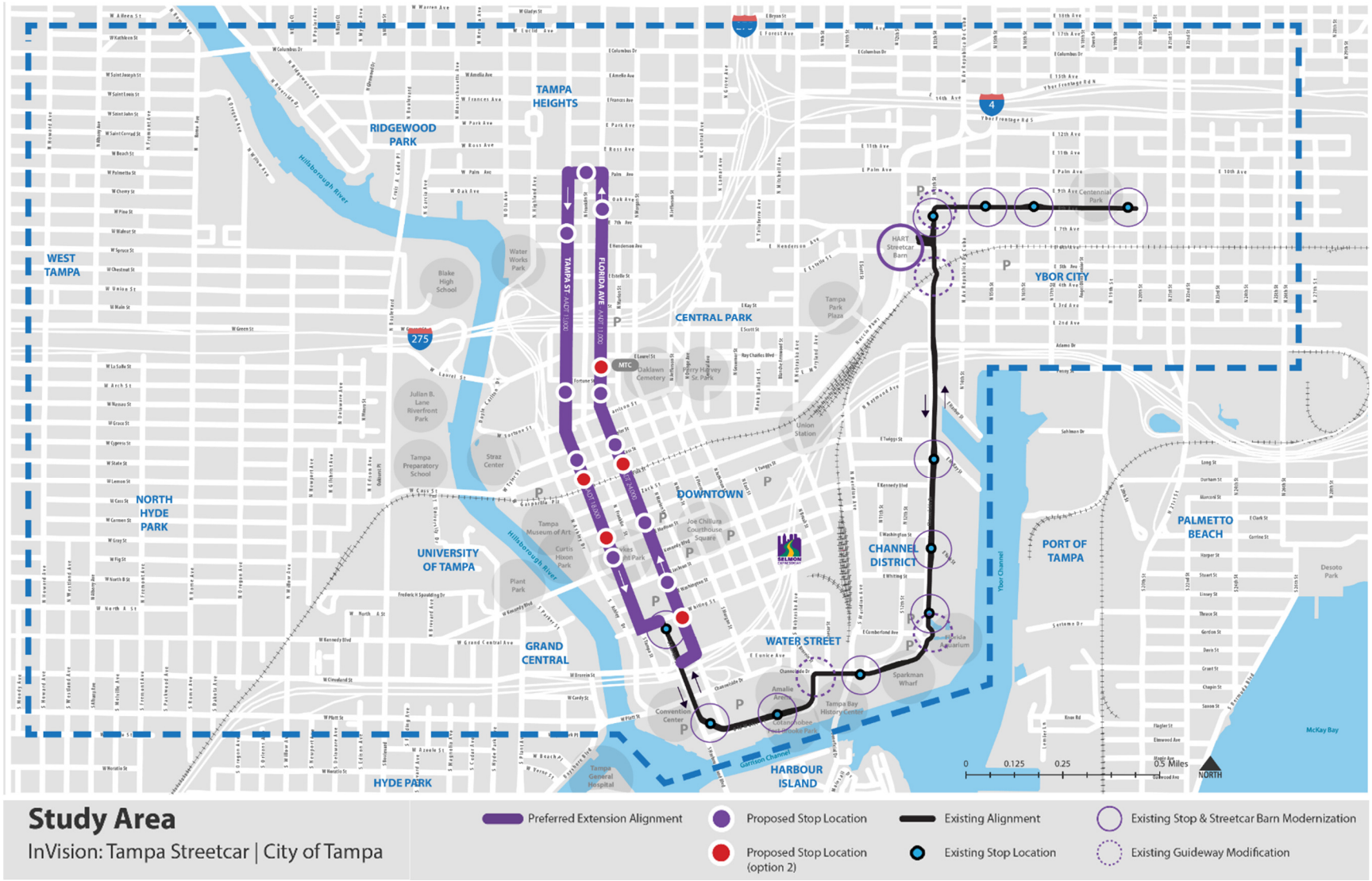

Figure 1: Study Area

EXTENSION GUIDEWAY

The proposed expansion of the streetcar system will utilize an 8-foot-wide embedded track slab. The track slab will be installed within the existing pavement section where existing roadway profile and grades can be accommodated, primarily within the curbside travel lane. Impacts to the existing pavement sections will be minimal. Depending on communications and traction power requirements to be determined in later design, embedded conduit within the track slab or duct bank below the track slab may be required.

EXTENSION TRACTION POWER

Power to support modern streetcar operations on the extension will be delivered via an Overhead Contact System (OCS) compatible with a streetcar-mounted pantograph. Poles spaced approximately 80 feet apart will be installed to carry the energized contact wire. Power for the extension will be provided by two 750 kilowatt (kW) traction power substations located along Florida Avenue, one beneath the Lee Roy Selmon Expressway (Selmon Expressway) and the other below the Interstate 275 (I-275) overpass.

EXTENSION STOPS

To accommodate modern streetcar vehicles and allow for shared use by other transit vehicle types, stops along the extension will be designed with a 14-inch-high platform section for level, ADA-compliant streetcar boarding and a lower, 8-inch-high platform section for bus boarding. The overall footprint of stops will be similar in scale to stops on the existing line, and measure approximately 10-feet-wide by 100-feet-long.

New and retrofitted stops will have similar amenities, which will include canopy/covered area; seating, railings, trash receptacles; system information map, kiosk, signage; lighting and security elements; and ADA-compliant access and ramps.

For stops along the extension, one of two stop types will be constructed. One type of stop will be positioned in the parking lane to the right of the guideway. The other type will be positioned in existing sidewalks adjacent the guideway. The type of stop will depend on the existing conditions and proposed roadway configuration at each location. During the project development phase, primary and optional stop locations have been identified. All stops, both primary and optional, are being evaluated for potential impacts, and are shown on **Figure 1**.

EXISTING GUIDEWAY MODIFICATIONS

Four locations along the existing streetcar guideway will require track reconstruction to accommodate the larger turning radius of a modern streetcar vehicle. Starting at the northern end of the existing guideway, the four track locations are:

- Near Jose Marti Park in Ybor City (on North 13th Street and East 8th Avenue).
- South of East 5th Street near the intersection of the streetcar and CSX tracks.
- On Channelside Drive at East Cumberland Avenue at the roundabout in the Channel District.
- On Channelside Drive and Old Water Street near the Tampa Bay History Center and Amalie Arena.

Coordination activities with CSX have been undertaken during the project development phase related to required modification of the existing crossing and the construction of new crossings at Florida Avenue and Tampa Street along Polk Street. The existing crossing of the CSX tracks occurs within CSX right-of-way south

of East 5th Street in Ybor City. The CSX tracks along Polk Street lie within existing City right-of-way. The CSX tracks along Polk Street are part of the Port Tamp Spur Subdivision and serve 1 to 6 trains per week.

EXISTING SYSTEM TRACTION POWER MODIFICATIONS

The existing traction power system will be modified to support modern streetcar operations. Modifications include upgrading the system from trolley wire to an overhead contact system that will accommodate the increased power demands of modern streetcar vehicles. Planned modifications also include replacing the existing overhead trolley wire (4/0 wire) with 350 thousand circular mils (kcmil) wire, and reconfiguration for use with a pantograph in lieu of a trolley pole. This upgrade to OCS will replace existing cantilevers, cross spans, and select poles and foundations. Additional power for the existing system to support modern streetcar operations will be delivered by a new 500 kW substation along the existing alignment and located within existing rights-of-way.

EXISTING SYSTEM STOP MODIFICATIONS

Each of the 11 stops along the existing streetcar line will be retrofitted to accommodate modern streetcar vehicles. Proposed stop modifications will occur with the footprint of the existing stop. The existing stops currently include a high-block boarding platform designed to accommodate the higher interior floor of replica streetcar vehicles. The existing 12-foot by 12-foot by 2-foot high-block platforms and ramps will be removed and replaced with a new 14-inch high platform for level, ADA-compliant streetcar boarding.

Existing shelters and other equipment and amenities will be removed and reinstalled or replaced in-kind. Future design phases will determine if the new concrete platform will be constructed around the existing columns or if the shelters will be removed and installed on the new platform or replaced in-kind. At the existing stops, the construction of new platforms will require removal of the existing concrete sidewalks, curb, and platforms, so that the new platform and ramps may be constructed.

VEHICLE MAINTENANCE FACILITY MODIFICATIONS

To accommodate the scale and number of modern streetcar vehicles required to serve the proposed system, including both the modernization and extension segments, the existing VMSF and yard will be modified. Based on preliminary design evaluation of existing site, buildings, and yard conditions it has been determined that proposed modifications can be accomplished within the the existing facility's site.

PROPERTY ACQUISITION

A majority of the Tampa Streetcar system, existing and proposed extension, will be within the existing right-of-way. However, there are up to five locations that will require the acquisition or dedication of property for conversion to right-of-way. These locations are described under Section U below.

B. Location and Zoning

Attach a map identifying the project's location and surrounding land uses. Note any critical resource areas (historic, cultural or environmental) or sensitive noise or vibration receptors (schools, hospitals, churches, residences, etc). Briefly describe the project area's zoning and indicate whether the proposed project is consistent with it. Briefly describe the community (geographic, demographic, economic and population characteristics) in the project vicinity.

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, and is centered on the Downtown Core with East Columbus Drive to the north, North 27th Street and Ybor Channel to the east; Plat 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

The Streetcar Feasibility Study Area is approximately 4,600 acres in size. A majority of the study area (nearly 70 percent, or 3,138 acres) is developed or undeveloped land. The remaining 1,438 acres are bodies of water, including 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.

Demographics

Using the population and employment estimates and projections from Hillsborough County Metropolitan Planning Organizations' (MPO) Tampa Bay Regional Planning Model (TBRPM), the study team evaluated the existing and future number of residents and workers in the study area. As shown in **Table 1**, in 2020, the study area is anticipated to have approximately 52,900 residents and 101,000 employees. By 2040, the anticipated number of residents will grow to approximately 83,600 and the number of employees within the study area will grow to approximately 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

Using Census Block data (2010 Census), six study zones were established to assess the concentrations of persons younger than 18 or older than 65, since such groups are typically unable or have less access to use of a personal vehicle. 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 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.

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%
University of Tampa / 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%
City of Tampa	**80,071**	**38,078**	**352,062**	**23%**	**9%**	**32%**

Source: U.S. Census Bureau, 2010 Census

For more detailed information on demographics please refer to the Purpose & Need, Context & Evaluation Plan for the project, dated November 1, 2017.

Existing Land Use

As shown in **Table 3**, **Error! Reference source not found.** and **Figure 2**, a majority of the 14,134 parcels in the study area are 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, and right-of-way. These uses are located throughout the study area, but are concentrated in the Downtown Core, along major highways such as I-275, Interstate 4 (I-4), and the Selmon Expressway, along Palm Avenue in Ybor City, Channelside Drive in the Channel District, and Florida Avenue in Tampa Heights.

Table 3: Study area Existing Land Use Summary

Existing Land Use	Parcels	Acres	% of Total
Residential	**9,426**	**874**	**28%**
Single-family	4,617	582	19%
Two-family	549	78	2%
Multi-family	4,260	214	7%
Industrial	**301**	**371**	**12%**
Light Industrial	237	200	6%
Heavy Industrial	64	171	5%
Commercial	**1,523**	**505**	**16%**
Light Commercial	1,158	377	12%
Heavy Commercial	70	20	1%
Commercial Parking	295	108	3%
Public/Institutional/Utilities/ROW	**1,412**	**1,030**	**33%**
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%
Parks/Cemetery/Open Space	**51**	**99**	**3%**
Agricultural	**3**	**4**	**<1%**
Vacant	**1,418**	**256**	**8%**
TOTAL	**14,134**	**3,138**	**100%**

Source: Hillsborough County Property Appraiser, HDR

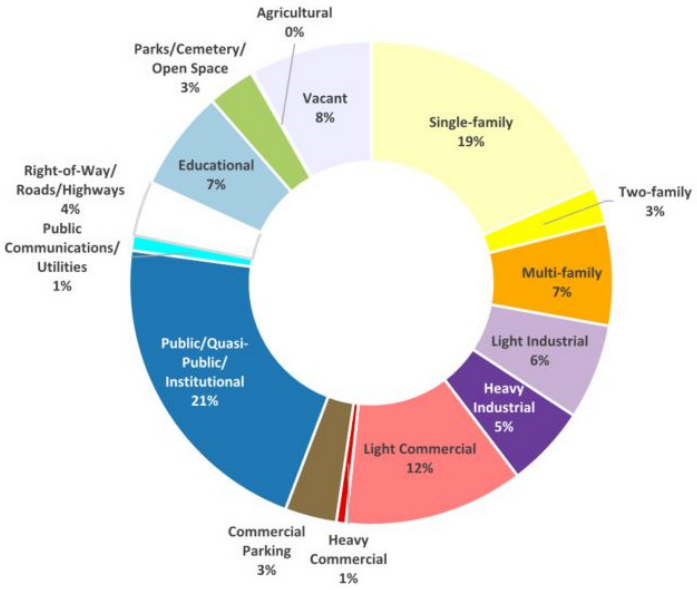

Figure 2: Study Area Existing Land Use Summary Chart

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 the 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, Plat Street, Cleveland Street, Cass Street, Howard Avenue, Columbus Drive, Seventh Avenue, and Adamo Drive. Commercial parking is located throughout the Central Business District (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 the Channel District, along Adamo Drive and eastern portions of Ybor City, and 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 University of South Florida (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.

Future

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 **Error! Reference source not found.Figure 3**.

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), Residental-50 (R-50), and CMU-35. Future land use designations in Tampa Heights include Residental-83 (R-83), Residental-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).

Conclusion

The Tampa Streetcar project will enhance the ability to travel between downtown destinations and will provide transportation access to areas with a high population of age groups that are typically unable to use or have less access to a personal vehicle. Within a quarter mile, the proposed extension of the Tampa Streetcar alignment is estimated to serve approximately 400 acres which has an existing future land use (FLU) category that permits high-density residential (greater than or equal to 35 dwelling units/acre). As a result of the expanded service, transit-oriented development is anticipated to occur and will be compatible with existing and future land uses and the Imagine 2040: Tampa Comprehensive Plan in January 2016.

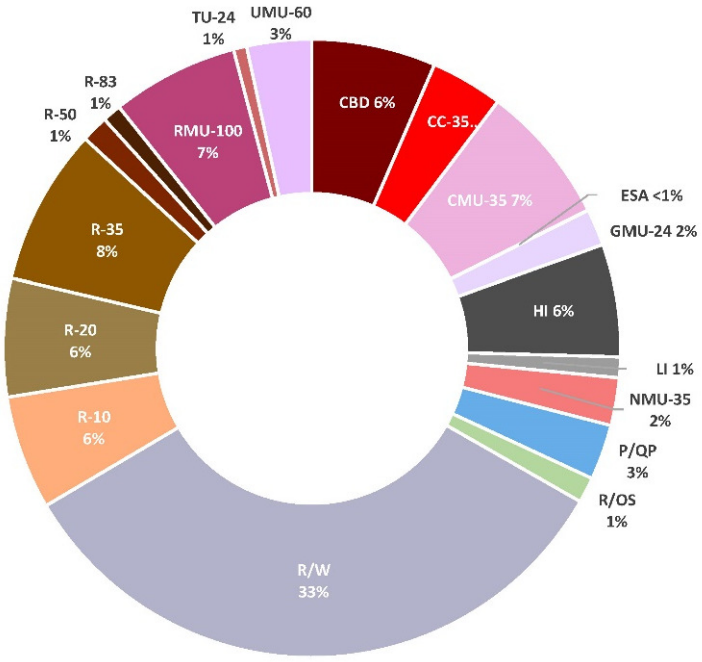

Figure 3: Study area Future Land Use Summary Chart

C. Traffic

Describe potential traffic and parking impacts, including whether the existing roadways have adequate capacity to handle increased bus or other vehicular traffic. Include a map or diagram if the project will modify existing roadway configurations. Describe connectivity to other transportation facilities and modes, and coordination with relevant agencies.

Traffic impacts were analyzed at 27 signalized study intersections and roadway segments of Florida Avenue and Tampa Street between Brorein Street and Palm Avenue. On Florida Avenue between Brorein Street and Harrison Street, and Tampa Street between Palm Avenue and Kennedy Boulevard, the alignment is proposed to be an exclusive transit lane, parking and transit stop lane, and three general purpose lanes. On Florida Avenue between Harrison Street and Palm Avenue, and Tampa Street between Kennedy Boulevard and Whiting Street, the streetcar is proposed to operate in mixed traffic. On Florida Avenue between Kennedy Boulevard and Zack Street, travel lanes are anticipated to be reduced from four to three through lanes and would qualify for a Lane Elimination Study as defined by Florida Department of Transportation (FDOT) Lane Elimination Committee at the Initial Meeting on June 12, 2019. The proposed typical sections and lane elimination section are shown in **Figure 4**.

The Lane Elimination Study and Study Area Traffic Impact Analysis included the following scenarios:

- Existing 2018
- Future 2024 and 2040 No Build
- Future 2024 and 2040 Build with Signal Timing Adjustments and Streetcar Phase

The Lane Elimination Study and Study Area Traffic Impact Analysis Future 2040 No Build scenario indicates that there are study roadway segments and study intersections that are anticipated to operate with an unacceptable Level of Service (LOS) or movements with a volume to capacity ratio (v/c) > 1 due to the projected growth for the 2040 traffic volumes. Minimal impact to the study roadway segments and study intersections is anticipated due to the proposed Tampa Streetcar project geometry changes, signal timing optimization, and dedicated streetcar phase. Signal retiming based on the City's Smart Mobility Division Advanced Traffic Management System (ATMS) plan will also benefit both the vehicles and streetcar operation in the future. In conclusion, the anticipated benefits of the proposed changes are aligned with the goals of the City of Tampa, FDOT and HART.

The Lane Elimination Study was submitted to FDOT D7 on September 17, 2019, revised and resubmitted on November 5, 2019, and is currently under review with FDOT District 7 and FDOT Central Office per Lane Elimination approval guidelines. The Study Area Traffic Impact Analysis was submitted to FDOT District 7 on November 15, 2019 and is currently under review with FDOT District 7. Traffic impact studies supplemental information are included as ATTACHMENT 2.

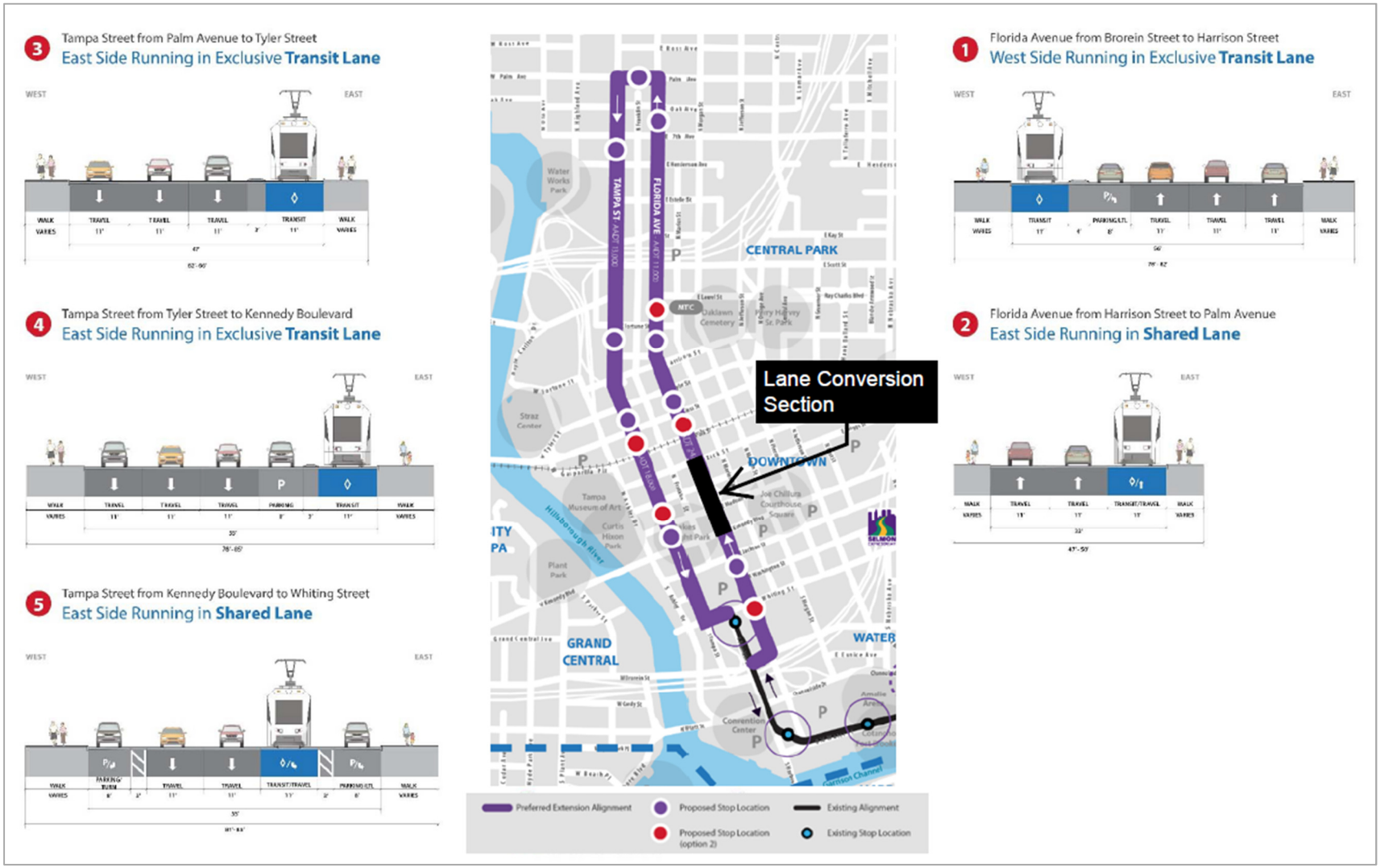

Figure 4: Proposed Typical Sections and Lane Elimination Section

D. Aesthetics

Will the project have an adverse effect on a scenic vista?

☒ *No*

☐ *Yes*

Will the project substantially degrade the existing visual character or quality of the site and its surroundings?

☒ *No*

☐ *Yes*

Will the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

☒ *No*

☐ *Yes*

The proposed project will modify visual features along the existing alignment. The replica streetcars will be replaced with modern streetcar vehicles, the stops will be retrofitted to provide a 14-inch high platform section, and the traction power system will be modified to accommodate the modern streetcar vehicles. However, these modifications to the existing system are not anticipated to degrade the visual character of the project area or adversely affect any scenic vistas.

The proposed project will also introduce new visual features along the proposed extension, including the embedded track, stations, and OCS. With the exception of the stations and OCS, the proposed project is at-grade and will be compatible with surrounding land uses. The design of the stations will comply with all historic district and local design guidelines. The intrusion of wires and poles into the visual landscape will be minimal. No scenic views will be adversely affected. The project will not create a new source of substantial light or glare that would adversely affect views in the area. A separate Determination of Effects Report will be prepared, and will include analysis of effects to all relevant NRHP-eligible or NRHP-listed resources identified within the APE and focus on the discussion of effects that the project improvements will have on those above-ground resources.

E. Air Quality

Does the project have the potential to impact air quality?

☒ *No*

☐ *Yes*

Is the project located in an EPA-designated non-attainment or maintenance area?

☒ *No*

☐ *Yes. Indicate the criteria pollutant and contact FTA to determine if a hot spot analysis is necessary.*

☐ *Carbon monoxide (CO)*

☐ *Ozone (O_3)*

☐ *Particulate matter (PM_{10} or $PM_{2.5}$)*

If the non-attainment area is also in a metropolitan area, was the project included in the MPO's Transportation Improvement Program (TIP) air quality conformity analysis?

☒ *No*

☐ *Yes. Date of USDOT conformity finding:*

The proposed project is an electric-powered streetcar that will not adversely affect emissions. Portions of Hillsborough County are currently designated as non-attainment or maintenance for National Ambient Air Quality Standards (NAAQS) pollutants (sulfur dioxide and lead, respectively);[1] however, the proposed project is not located in these areas.

F. Coastal Zone

Is the proposed project located in a designated coastal zone management area?

☒ *No*

☐ *Yes, describe coordination with the State regarding consistency with the coastal zone management plan and attach the State finding, if available.*

The majority of the Tampa Streetcar system, existing and proposed extension, would be within the existing right-of-way. No adverse effects are anticipated to Coastal Zone Management Areas. An email dated August 15, 2019 states that the Florida State Clearinghouse does not select to review the project (see ATTACHMENT 3).

G. Environmental Justice

Determine the presence of minority and low-income populations (business owners, land owners, and residents) within about a quarter-mile of the project area. Indicate whether the project will have disproportionately high and adverse impacts on minority or low-income populations. Describe any potential adverse effects. Describe outreach efforts targeted specifically at minority or low-income populations.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that federal agencies consider and address disproportionately adverse environmental effects of proposed federal projects on minority and low-income populations. Minority includes persons who are American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, or Native Hawaiian or other Pacific Islander. Low-income means a person whose median household income is at or below the Department of Health and Human Services' poverty guidelines.

[1] US Environmental Protection Agency. Florida Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Available at https://www3.epa.gov/airquality/greenbook/anayo_fl.html. Accessed July 31, 2019.

American Community Survey 2017 5-year estimates derived from 2010 U.S. Census data was used to identify environmental justice communities within the study area. The study area is defined as a half-mile buffer around the existing and proposed extension alignment. Minority areas were identified where minority populations exceed 50% of the population in a census block group. Low-income areas were identified where median household income was below the 2017 5-year estimate for the City of Tampa ($48,245). Minority and low-income population areas are shown in **Figure 5.**

The existing and proposed extension streetcar alignment is within a half mile from over 5,200 transit dependent residents who would have access to greater mobility options. The modernization and extension of the Tampa Streetcar is not anticipated to have disproportionately high or adverse impacts on minority or low-income populations.

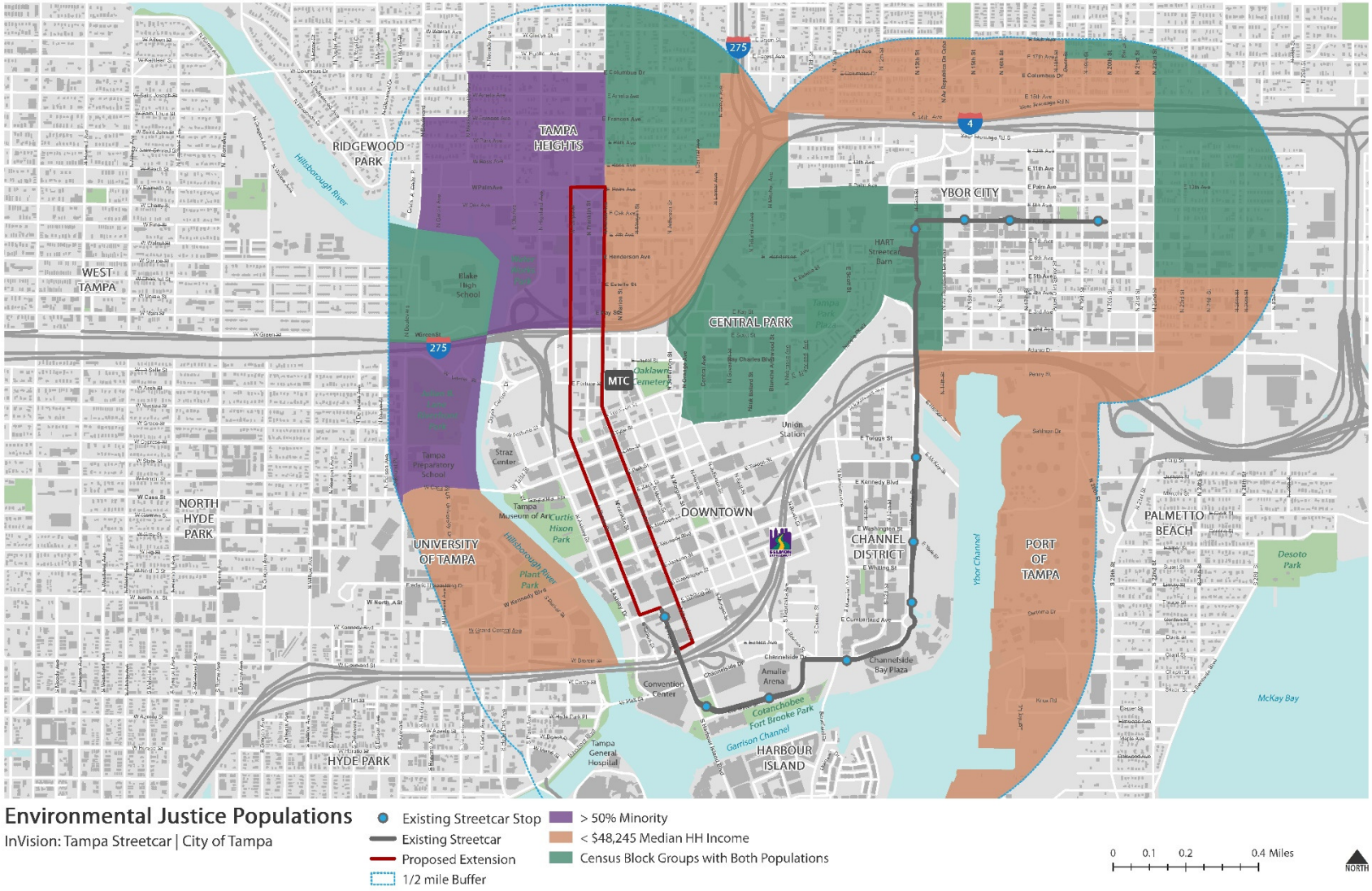

Figure 5: Environmental Justice Population Census Block Groups

H. Floodplains

Is the proposed project located within the Federal Emergency Management Agency (FEMA) 100-year floodplain?

☐ *No*

☒ *Yes, describe potential impacts, indicate if the project will impact the base flood elevation, and include or link to the FEMA Flood Insurance Rate Map (FIRM) with the project location identified.*

The Tampa Streetcar existing and proposed extension alignment crosses through two designations of floodplains, AE and X. The majority of construction will mainly be completed within the existing right-of-way. No changes to floodplains are anticipated within the corridor. **Figure 6** shows the FEMA flood hazard zones with the project location identified.

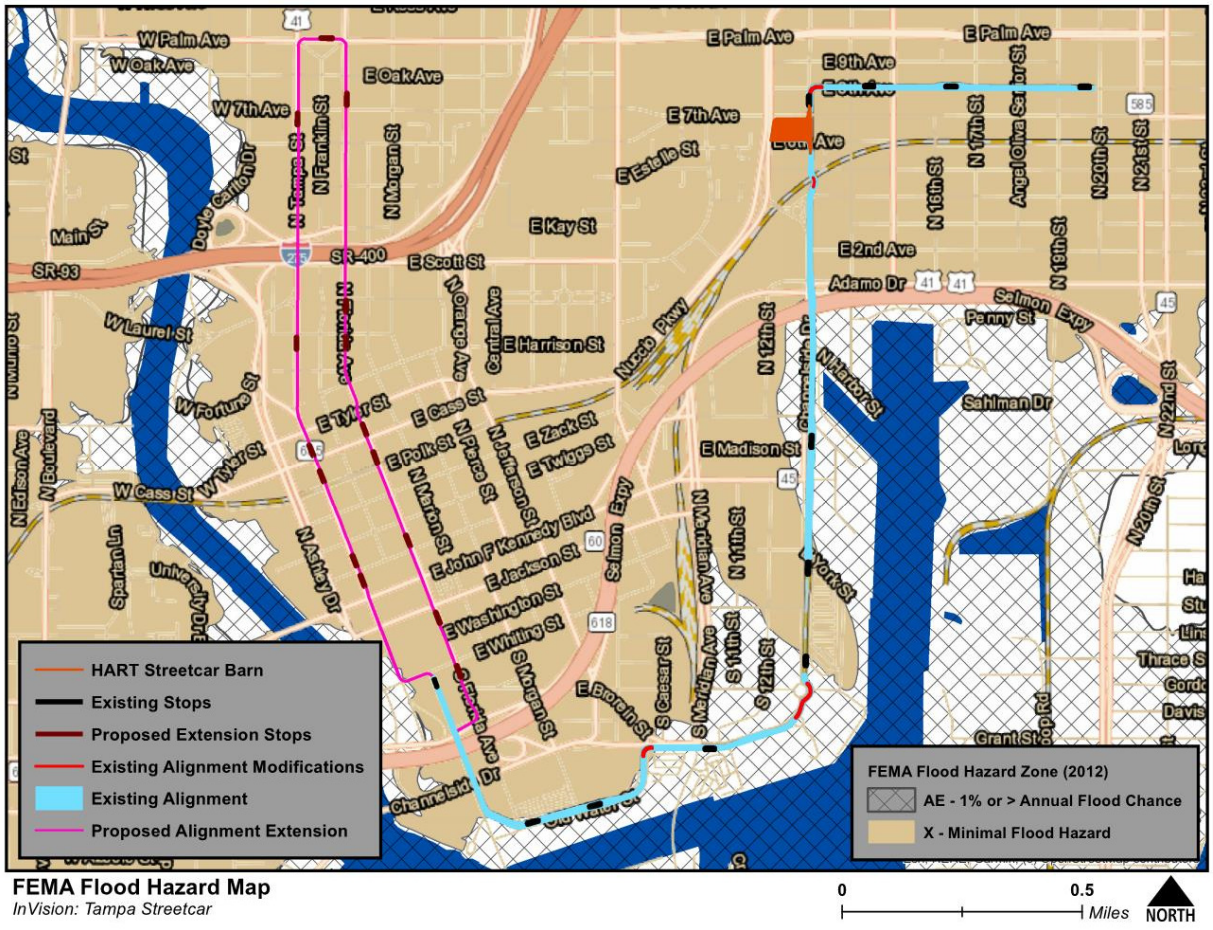

Figure 6: FEMA Flood Hazard Map

I. Hazardous Material

Is there any known or potential contamination at the project site? This may include, but is not limited to, lead/asbestos in existing facilities or building materials; above or below ground storage tanks; or a history of industrial uses of the site.

☐ *No, describe steps taken to determine whether hazardous materials are present on the site.*

☒ *Yes, note mitigation and clean-up measures that will be taken to remove hazardous materials from the project site. If the project includes property acquisition, identify if a Phase I Environmental Site Assessment for the land to be acquired has been completed and the results.*

The project study area was evaluated to determine the potential for contamination of the proposed Tampa Streetcar existing and proposed extension alignments from adjacent properties and business operations.

A desktop environmental database review was conducted in July 2019. Electronically available information on the Florida Department of Environmental Protection (FDEP) Oculus website was reviewed for the Preferred Alternative. This review identified locations including but not limited to underground storage tanks (USTs), petroleum discharges, registered dry cleaners, superfund sites, solid waste sites, and brownfield sites.

Nineteen sites were determined as having the potential for contamination involvement with the existing and proposed extension alignments. As shown on **Figure 7**, of the 19 sites investigated, the following risk rankings have been applied: eight HIGH ranking sites, five MEDIUM ranking sites, and six LOW ranking sites. There are over 100 sites listed in the EDR report that are within 500 feet of the project alignment that were determined to have NO potential contamination impact to the project. Given this significant number of sites determined not to have potential contamination involvement with the existing and proposed extension alignments, site reconnaissance was not performed for these sites.

For sites ranked “LOW” for potential contamination, no further action is required at this time. These sites/facilities have the potential to impact the study area but have been determined to have low risk to the project at this time. Variables that may change the risk ranking include a facility’s non-compliance to environmental regulations, new discharges to the soil or groundwater, and modifications to current permits. Should any of these variables change, additional assessment of the facilities would be conducted.

For those locations with a risk ranking of “MEDIUM” or “HIGH”, additional investigation and/or research is recommended to understand the level of potential contamination conditions. A thorough review of files with the FDEP and discussions with case managers may provide enough information on the contamination conditions and concerns at these sites. Level II field screening may be required in which a soil and groundwater sampling plan may be needed. The Contamination Assessment Technical Memorandum is provided in ATTACHMENT 4.

Figure Site #	Site Address	Distance from Alignment	Concern
1	1898 Nuccio Parkway, Tampa, FL 33605	860 ft	HIGH
2	1234 North 5th Avenue, Tampa, FL 33602	200 ft	HIGH
3	101 S 13th Street, Tampa, FL 33602	200 ft	MEDIUM
4	908 East Eunice Street, Tampa, FL 33602	350 ft	LOW
5	908 East Eunice Street, Tampa, FL 33602	100 ft	HIGH
6	100 Tampa Street, Tampa, FL 33602	100 ft	LOW
7	400 North Tampa Street, Tampa, FL 33602	60 ft	MEDIUM
8	700 North Tampa Street, Tampa, FL 33602	75 ft	LOW
9	1004 North Florida Avenue, Tampa, FL 33602	50 ft	LOW
10	1005 North Tampa Street, Tampa, FL 33602	75 ft	MEDIUM
11	Royal Street & Tampa Street, Tampa, FL 33602	75 ft	MEDIUM
12	1201 North Tampa Street, Tampa, FL 33602	50 ft	HIGH
13	1710 North Tampa Street, Tampa, FL 33602	350 ft	LOW
14	1112 North Florida Avenue, Tampa, FL 33602	75 ft	HIGH
15	400 East Harrison Street, Tampa, FL 33602	75 ft	HIGH
16	905 North Florida Avenue, Tampa, FL 33602	75 ft	HIGH
17	801 North Florida Avenue, Tampa, FL 33602	200 ft	MEDIUM
18	401-405 East Kennedy Boulevard, Tampa, FL 33602	100 ft	HIGH
19	401 East Jackson Street, Tampa, FL 33602	150 ft	LOW

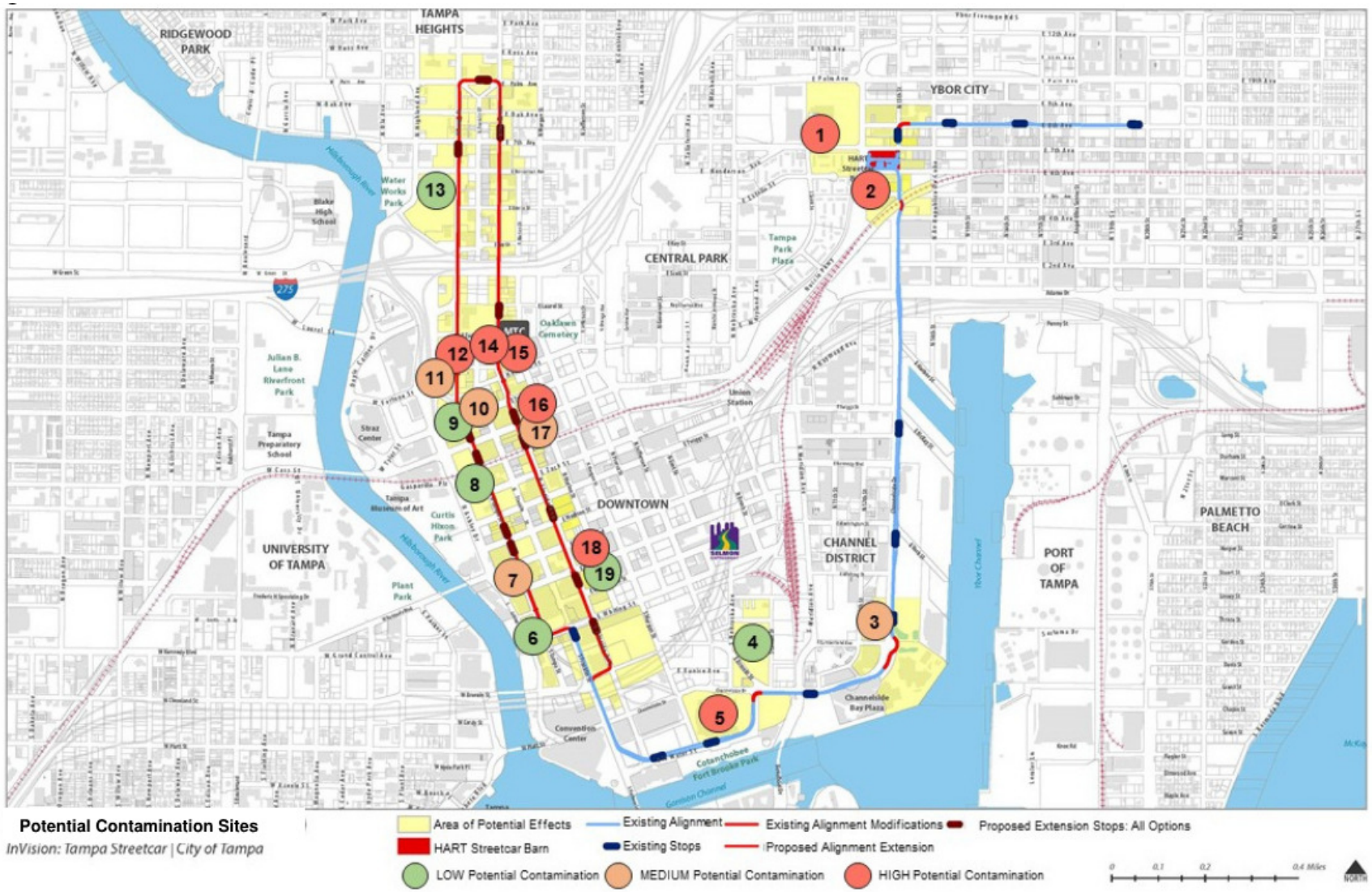

Figure 7: Potential Contamination Sites

J. Navigable Waterways

Does the proposed project cross or have the potential to impact a navigable waterway?

☒ *No*

☐ *Yes, describe potential impacts and any coordination with the US Coast Guard*

K. Noise and Vibration

Does the project have the potential to increase noise or vibration?

☒ *No*

☐ *Yes. Describe impact and provide map identifying sensitive receptors such as schools, hospitals, parks and residences. If the project will result in a change in noise and vibration sources, you must use FTA's "Transit Noise and Vibration Impact Assessment" methodology to determine impact.*

A noise and vibration assessment was conducted based on the guidelines outlined in the Federal Transit Authority's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (September 2018) and is summarized below. The full report is included as ATTACHMENT 5.

Noise

Land uses along the proposed extension are comprised of a mix of commercial, retail, office, institutional, residential, medical, and recreational land uses. No Category 1 (high sensitivity) land uses exist along the proposed extension, and the primary land uses of interest are classified as a Category 2 (residential) or Category 3 (institutional) land use. Operations along the proposed extension may emit noise from the following sources:

- Rolling noise from the interaction of wheels with their running surfaces.
    - This is a function of the speed at which the transit vehicle operates and the condition of the running surface (rail) and the wheels.
- Impact noise from wheels at turnouts.
- Noise from the interaction of wheels in tight radius curves (i.e., wheel squeal).
    - This was not modeled in this assessment since it is variable. Transit vehicles can be equipped with a friction modifier dispenser, which reduces the potential for wheel squeal when applied to the wheel-rail contact area.
- Noise from auxiliary equipment, such as ventilation units and electric drive motors.
- Noise from warning devices, such as bells and horns.
    - It is not anticipated that warning devices will be an issue for this project since the streetcars will operate within the right-of-way with local traffic. Warning devices will only be sounded if the operator feels that it is necessary to avoid a dangerous situation.
- Noise from traction power substations.
    - Transformers located within each substation emit a low-frequency hum, and the Heating, Ventilation and Air Conditioning (HVAC) systems used to heat and cool the building emit noise like a residential air conditioner.

The existing day-night average noise level (Ldn) in the vicinity of the project corridor ranges between 70 A-weighted decibels (dBA) and 74 dBA, and the existing one hour equivalent noise level [Leq(h)] in the vicinity of the project corridor ranges between 66 dBA and 69 dBA. The operations associated with the streetcar along the proposed extension are anticipated to create Ldn noise levels that range between 43 and 58 dBA as well as Leq(h) noise levels that range between 36 and 54 dBA. These levels are below FTA criteria thresholds of 69 to 70 dBA that would constitute a moderate impact for Ldn, or 66 to 69 dBA for Leq(h). No impacts to noise sensitive land uses are anticipated.

The proposed modernizations along the existing streetcar track are being completed in the same locations as the existing track or stations; therefore, noticeable changes in noise levels are not expected to occur along the existing alignment.

Vibration

No special building or high sensitivity land uses are located along the proposed extension. The primary land uses of interest are classified as a land use Categories 2 (residential) or 3 (institutional).

Ground-borne vibration (GBV) levels along the project corridor are anticipated to range from 56 to 72 Vibration decibels (VdB) for Land Use Category 2 properties, and GBV levels are anticipated to range from 52 to 74 VdB for Land Use Category 3 properties. The GBV levels are below the FTA Impact Criteria of 75 VdB and 78 VdB for Land Use Category 2 properties and Land Use Category 3 properties, respectively.

Ground-borne noise (GBN) levels along the project corridor are anticipated to range from 21 to 37 dBA for Land Use Category 2 properties, and GBN levels are anticipated to range from 17 to 39 dBA for Land Use Category 3 properties. None of these levels are expected to exceed the ground-borne noise criteria of 38 dBA and 43 dBA for Land Use Category 2 properties and Land Use Category 3 properties, respectively.

L. Prime and Unique Lands

Does the proposal involve the use of any prime or unique farmlands?

☒ *No*

☐ *Yes, describe potential impacts and any coordination with the Soil Conservation Service of the U.S. Department of Agriculture.*

M. Historic and Cultural Resources

Impacts to cultural, historic, or recreational properties may trigger Section 106 or tribal consultations or a Section 4(f) evaluation, requiring consideration of avoidance alternatives. Does the project involve any ground disturbing activities? Are there any historic resources in the vicinity of the project?

To comply with federal and State regulations, a Cultural Resources Assessment Survey (CRAS) was conducted to identify historic and archaeological resources that may be affected by the Tampa Streetcar project. The CRAS is a major task required as part of the National Historic Preservation Act of 1966 Section 106 process. An Area of Potential Effect (APE) was established to determine the physical area in which cultural resources will be identified. The APE was determined by considering the type of improvements being proposed and the

potential effects these improvements could have on cultural resources. The APE determination also considered the urban/commercial/industrial character and setting of the project corridor as well as the current noise levels.

The Area of Potential Effects (APE) for the Tampa Streetcar project was defined as:

1. The construction footprint of the proposed extension, proposed extension stops, modifications to the existing alignment, modifications to existing stops, and modifications to the existing VMSF; and

2. Those parcels adjacent to the proposed extension, proposed extension stops, modifications to the existing alignment, and the existing VMSF.

The APE is shown in Figure 8Error! Reference source not found.. Within this APE, the elements listed in Item 1 have potential to affect archaeological resources, while elements in both items 1 and 2 have potential to affect above-ground historic resources. With regard to proposed modifications of existing stops, the City commits to restriction of construction activities to the footprint of the existing stops and use of materials consistent in quality and type with those currently in place. Therefore, the FTA has determined that proposed modifications to existing stops do not have the potential to affect any above-ground historic resources that may be located in adjacent parcels. Assuming construction of similar-or-like stations and no additional substantial subsurface work such as new underground utility lines, the FTA also agrees that proposed modifications to existing stops do not have potential to affect archaeological resources. If new utility lines or extensive subsurface work is needed at these locations, additional review may be requested.

The CRAS completed for the Tampa Streetcar Project is provided in ATTACHMENT 6. It focuses on the proposed streetcar extension and includes the following:

- An archaeological desktop analysis of the preferred route to document the presence of known archaeological sites within the project area and to identify areas where testing may be required by the City, State, or Federal agencies. As part of the route exists within the CBD of the City of Tampa, the project would be subject to review of potential effects to archaeological resources within the CBD under current City ordinances. No archaeological field survey or testing was conducted at this stage of the project.

- A historic resources survey of the preferred route, including a description and evaluation of National Register of Historic Places (NRHP) eligibility for each historic resource identified.

No archaeological field survey was undertaken, but the results of a desktop archaeological review of the APE are provided in the CRAS. In general, it is recommended that great care be taken to avoid or conduct appropriate archaeological testing in areas that have the potential for unmarked human burials, or other disturbed human remains. Specific areas within the APE were identified as having a higher probability of archaeological resources being impacted during project construction, and recommendations for testing and/or monitoring are included. The majority of the proposed alignment lies within the Tampa CBD, and

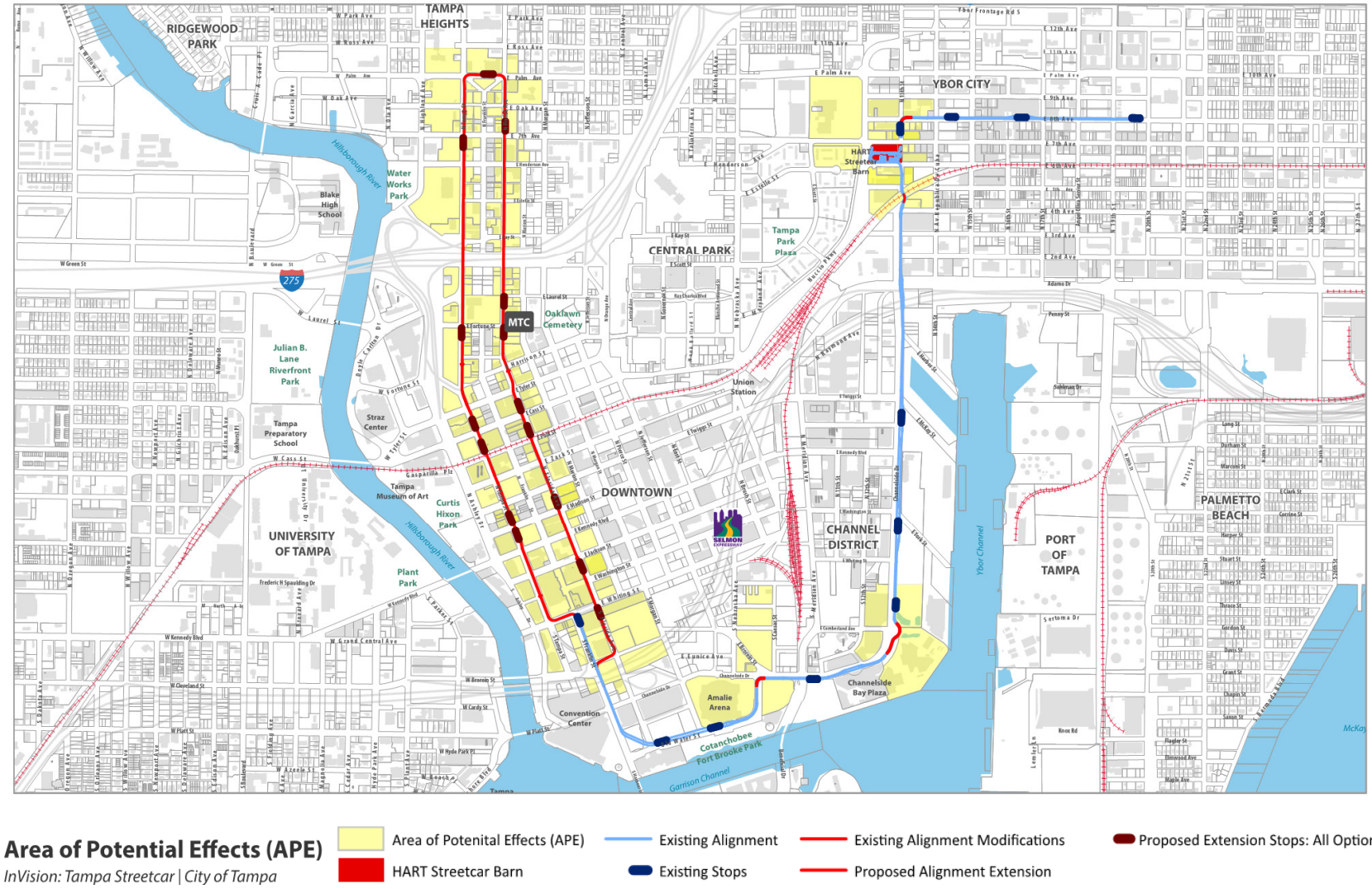

Figure 8: Area of Potential Effects (APE)

therefore, falls under requirements to conduct Historical and Archaeological Assessment under City Ordinance 8249-A (City Resolution 93-853).

City streets built on brick paving have a considerable likelihood of preserving archaeological features. It is recommended that demolition (including hand removal/palletization of brick) of these sections of road be monitored by a qualified archaeologist. Any archaeological features (as described in the CRAS) that are observed should be carefully documented and tested with shovel skimming, bisecting, and screening of any excavated material through ¼-inch hardware cloth. Any significant features that are discovered, such as barrel wells, privies, and/or foundations, should be considered for avoidance or an expanded scope of archaeological testing and data collection. Great caution is recommended when disturbing any subgrade surfaces in vicinity of known or predicted unmarked human burials. As described in the CRAS, these areas include Florida Avenue immediately south of Whiting Street and both crossings of Jackson Street on Florida and Tampa avenues. Particularly in the section of Florida Avenue south of Whiting Street, human remains are known to lie immediately beneath the proposed track alignment.

Historic resources field survey was conducted between June 5 and June 20, 2019, and resulted in the identification of 85 historic resources, 58 of which were previously recorded and 27 of which are newly recorded. These 85 historic resources include 4 NRHP or NHL-listed historic districts, 2 locally designated historic districts, 1 local multiple property designation, 3 resource groups (1 railroad, 1 structure complex, and 1 landscape), and 75 structures. The 26 newly recorded resources comprise 25 of the structures and 1 of the resource groups (the structure complex). NRHP-listed or eligible above-ground resources have been identified along or adjacent to the existing and proposed extension alignment and the existing VMSF. A separate Determination of Effects Report will be prepared and will include analysis of effects to all relevant NRHP-eligible or NRHP-listed resources identified within the APE and focus on the discussion of effects that the project improvements will have on those above-ground resources.

Mitigation measures for historic and cultural resources are described in Section X.

N. Biological

Are there any species located within the project vicinity that are listed as threatened or endangered under the Endangered Species Act? Determine this by obtaining lists of threatened and endangered species and critical habitat from the US Fish and Wildlife Service and the National Marine Fisheries Service.

Describe any critical habitat, essential fish habitat or other ecologically sensitive areas within or near the project area.

A Florida Natural Areas Biodiversity Matrix was queried (July 2019) to identify federal and State threatened and endangered species recorded within the project area. A U.S. Fish and Wildlife Service (USFWS) Species by County Report was generated for Hillsborough County (July 2019) to review protected wildlife with the potential to utilize the project area. Subsequently, desktop analysis was performed to evaluate State and federal geodatabase records for species previously documented within this region and to evaluate potential wildlife habitat. These records were analyzed using Geographic Information System (GIS). Geodatabase sources included:

- Florida Department of Environmental Protection Outstanding Florida Water (2019)
- Florida Fish and Wildlife Conservation Commission (FWC) Eagle Nest database (2016)
- Florida Fish and Wildlife Conservation Commission Florida Shorebird database (2018)
- Florida Fish and Wildlife Conservation Commission Manatee Synoptic Surveys ('91-2014)
- FWC Wildlife Research Institute Sea Turtle Data (2016)
- Florida Natural Areas Inventory Florida Conservation Lands (2014)
- Natural Resources Conservation Service Soils of Hillsborough County Geodatabase (2012)
- USFWS Wood Stork Active Nesting Colonies and Core Foraging Areas (2009-2018).
- USFWS Threatened and Endangered Species Act (ESA) Critical Habitat (2019)

No USFWS critical habitat, essential fish habitat, or other ecologically sensitive habitat is located within the project area. **Table 4** lists protected species known to occur within this part of Hillsborough County. An email dated August 15, 2019 states that the Florida State Clearinghouse does not select to review the project (see ATTACHMENT 3).

Table 4: Protected Wildlife Known to Occur in this region of Hillsborough County

Scientific Name	Common Name	Federal Listing	State Listing
Fish			
Acipenser oxyrinchus desotoi	Gulf Sturgeon	Threatened	Threatened
Pristis pectinata	Smalltooth sawfish	Endangered	Endangered
Reptiles and Amphibians			
Caretta	Loggerhead sea turtle	Threatened	Threatened
Chelonia mydas	Green sea turtle	Endangered	Endangered
Crotalus adamanteus	Eastern diamondback rattlesnake	Under Review	Not Listed
Drymarchon corais couperi	Eastern indigo snake	Threatened	Threatened
Gopherus polyphemus	Gopher tortoise	Candidate for Listing	Threatened
Lampropeltis extenuata	Short-tailed snake	Not Listed	Threatened
Lepidochelys kempii	Kemp's ridley sea turtle	Endangered	Endangered
Birds			
Platalea ajaja	Rosette spoonbill	**	Threatened
Athene cunicularia floridana	Florida burrowing owl	**	Threatened
Calidris canutus rufa	Red knot	Threatened	Threatened
Charadrius melodus	[1] Piping plover	Threatened	Threatened
Charadrius nivosus	Snowy plover	**	Threatened
Egretta caerulea	Little blue heron	**	Threatened
Egretta rufescens	Reddish egret	**	Threatened
Egretta tricolor	Tricolored heron	**	Threatened
Haematopus palliatus	American oystercatcher	**	Threatened

Scientific Name	Common Name	Federal Listing	State Listing
Haliaeetus leucocephalus	Bald eagle	* | **	Not Listed
Laterallus jamaicensis	Black rail	Proposed Threatened	Not Listed
Mycteria americana	[2] Wood stork	Threatened	Threatened
Rynchops niger	Black skimmer	**	Threatened
Pandion haliaetus	Osprey	**	Not Listed
Sternula antillarum	Least tern	**	Threatened
Mammals			
Trichechus manatus	[1] West Indian manatee	Endangered	Endangered

Species designations updated as of July 2019.

[1] Project within the USFWS Consultation Area. [2] Project within the USFWS 15-mile Core Foraging Area for eight (8) wood stork colonies.

Protected - * Bald & Golden Eagle Protection Act and Migratory Bird Treaty Act ▪ ** Migratory Bird Treaty Act.

O. Recreational

Is the project located in or adjacent to a park or recreation area?

☐ *No*

☒ *Yes, provide information on potential impacts to the park or recreation area. Please also indicate if the park involved Land and Water Conservation Act funds (Section 6(f))*

Recreational uses in the study area include Julian B. Lane Riverfront Park, Perry Harvey Park, Tampa Park Plaza, Cotanchobee Fort Brooke Park, Desoto Park, and Water Works Park. The proposed project will be located in existing transportation right-of-way and will not require any permanent or temporary right-of-way acquisition or easement from these parks. No Section 4(f) use of any recreational property is anticipated.

P. Seismic and Soils

Are there any unusual seismic or soil conditions in the project vicinity? If so, indicate on project map and describe the seismic standards to which the project will be designed.

☒ *No*

☐ *Yes, describe*

Q. Water Quality

Does the project have the potential to impact water quality, including during construction.

☒ *No*

☐ *Yes, describe potential impacts and best management practices which will be in place.*

Will there be an increase in new impervious surface or restored pervious surface?

☒ *No*

☐ *Yes, describe potential impacts and proposed treatment for stormwater runoff.*

Is the project located in the vicinity of an EPA-designated sole source aquifer (SSA)?

☐ *No*

☒ *Yes, provide the name of the aquifer which the project is located in and describe any potential impacts to the aquifer. Also include the approximate amount of new impervious surface created by the project. (May require completion of SSA worksheet.)*

Neither wetlands nor surface waters exist within the study area. The project will not temporarily or permanently impact wetlands or surface waters, nor will it require alternations to streams or waterways. The project does not discharge to an Outstanding Florida Water or an Aquatic Preserve. A Stormwater Pollution Prevention Plan (SWPPP) would be developed and implemented and a National Pollution Discharge Elimination System (NPDES) permit obtained prior to construction, as needed. An Erosion and Sediment Control Plan will be prepared per the Florida Department of Environmental Protection State of Florida Erosion and Sediment Control Designer and Reviewer Manual, FDOT and FDEP (2013). The SWPPP will contain Erosion and Sediment Control Plan exhibits and will describe the implementation of best management practices (BMPs) that reduce pollutants in stormwater discharges during construction as required.

The project is located within the boundaries of the Floridian Aquifer. The total amount of new impervious surface areas for the project is minimal and will be contained to stop locations. No adverse effects are anticipated from this project.

R. Wetlands

Does the proposal temporarily or permanently impact wetlands or require alterations to streams or waterways?

☒ *No*

☐ *Yes, describe potential impacts*

No wetlands exist within the study area.

S. Construction Impacts

Describe the construction plan and identify impacts due to construction noise, utility disruption, debris and spoil disposal, and staging areas. Address air and water quality impacts, safety and security issues, and disruptions to traffic and access to property.

Construction techniques employed for the project will be characteristic of municipal infrastructure activities associated with maintenance or installation of utilities, street pavement or other infrastructure features. Deployment of equipment and materials will occur within public right-of-way. Work hours will be those commonly found in the industry. Nighttime work may be utilized subject to circumstances, appropriate conditions, and property owner notification.

Construction Noise

The predominant construction activities associated with this project are expected to be pavement removal, hauling, grading, and paving. Temporary and localized construction noise and vibration impacts may occur as a result of these activities. During daytime hours, the potential effects of these impacts will be temporary speech interference for passers-by and those individuals living or working near the project. Loud construction noise activities, such as the usage of impact-hammers (jack hammer, hoe-ram), will provide sporadic and temporary construction noise and vibration impacts in the vicinity of those activities. Construction noise from the proposed streetcar project along the corridor could impact noise and vibration sensitive receptors directly adjacent to these activities. It is anticipated that construction activities in any one area for extended periods will be limited; therefore, any such intrusive noise and/or vibration will be temporary and would not be considered an impact under FTA criteria.

Generally, low-cost and easily implemented construction noise control measures should be incorporated into the project plans and specifications to the extent possible. These measures include, but are not limited to, work-hour limits, equipment exhaust muffler requirements, elimination of "tail gate banging", ambient-sensitive backup alarms, construction noise complaint mechanisms, as well as consistent and transparent community communication. Construction activities will comply with Chapter 5, Section 301 of the City of Tampa's Code of Ordinances and FDOT's *Standard Specifications for Road and Bridge Construction*.

Utility Disruption

Excavation work associated with installation of the track may require that some utilities be relocated. Temporary interruptions in services could be experienced during relocation or rerouting of utilities. The City is planning to upgrade sections of stormwater utility along the alignment during construction. Streets will remain open, with partial lane closures as necessary. The City will continue to coordinate with utility providers so that any required changes to their facilities will minimize disruption to services and be coordinated with the construction schedule.

Debris and Spoil Disposal

All solid wastes generated by construction of the proposed project will be disposed of properly in a permitted, licensed solid waste facility. Project demolition of concrete, asphalt, and other potentially recyclable construction materials will be directed to the appropriate storage, crushing, or renovation facility for recycling.

Appropriate measures will be taken during construction to avoid spills that could contaminate groundwater or surface water in the project area. In the event that a leak or spill occurs during construction, appropriate action to remedy the situation will be taken in accordance with state guidelines and regulations.

Staging Areas

Staging areas will be determined during final design or by the contractor. Storage for idle equipment and materials will be done in a matter that does not obstruct access or visibility to adjacent businesses.

Air and Water Quality

The air quality impact will be negligible and limited primarily to initial rail construction activities and dust from hauling material. Air pollution associated with the creation of airborne particles will be effectively

controlled through the use of watering or the application of calcium chloride in accordance with FDOT's *Standard Specifications for Road and Bridge Construction*.

Water quality impacts resulting from erosion and sedimentation will also be controlled in accordance with FDOT's Standard Specifications for Construction and through the use of BMPs. Water runoff caused by soil displacement will be contained and filtered using appropriate methods specified by the Hillsborough County Environmental Protection Commission, Water Management Division. The use of hay bales, silt screens, or other EPC approved methods of erosion and turbidity control will be required as conditions of permit approvals.

Safety and Security

Safety and security measures for the proposed streetcar extension will be the same as those deployed on the existing streetcar line. The project design will consider crime prevention through environmental design (CPTED) principles. To increase personal security, the project will use transparent glass shelters and ample lighting at the stops. In addition, existing or new security cameras may serve as an additional deterrent for criminal activity.

Streetcar stops and shelters will be designed to comply with ADA guidelines by including stable surfaces, no steep slopes, space to maneuver from the shelter to the streetcar doors, and safe linkages to the sidewalk. Stop platforms will be positioned to coordinate smoothly with the vehicle threshold and to minimize vertical and horizontal gaps.

The City and HART will coordinate to appropriately place warning signage and/or pavement markings to direct pedestrians, bicyclists and vehicular traffic as necessary to avoid hazards.

The streetcars will be equipped with a bell and a horn. The bell will be used under normal operating conditions, while the horn will only be used if the operator feels that there is a dangerous situation. HART will ensure that the streetcar operators will receive driver safety training to make sure operators know how to identify and respond to potential conflicts with pedestrians, vehicles, and bicycles.

Disruptions to Traffic and Access to Property

Maintenance of traffic (MOT) during construction is not anticipated to initiate long-term lane closures along the Tampa Street and Florida Avenue corridors. Short-term lane closures are anticipated to facilitate construction of the streetcar infrastructure. Intersection closures are also anticipated due to repaving and will be scheduled with lane closures to minimize traffic impacts. The existing parallel parking spaces on the corridor may be impacted during construction due to a shift in lanes to maintain roadway capacity. Currently there is limited access from Tampa Street and Florida Avenue to properties adjacent to the proposed extension alignment which can be accessed from the intersecting minor streets throughout the study area. Therefore, property access is not anticipated to be impacted due to construction. Construction of the proposed extension and modernization improvements may impact the existing streetcar service schedule. Construction scheduling and phasing will be addressed during the final design and engineering phases of the project.

Construction related to the expansion of the existing VMSF is not anticipated to impact the adjacent roadway network traffic. Construction at the VMSF and yard is anticipated to be completed within the existing property boundaries, which is owned by the City of Tampa.

T. Cumulative and Indirect Impacts

Are cumulative and indirect impacts likely?

☐ *No*

☒ *Yes, describe the reasonably foreseeable:*

b) Cumulative impacts, which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes them. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative impacts related to transit-oriented development and enhanced connections to existing and proposed transit modes are expected at buildout of the Tampa Streetcar project. Within a quarter mile, the proposed extension of the Tampa Streetcar alignment is estimated to serve approximately 400 acres which has an existing future land use (FLU) category that permits high-density residential (greater than or equal to 35 dwelling units/acre). Additionally, the proposed extension of the Tampa Streetcar alignment will connect to existing Hillsborough Area Regional Transit (HART) routes which travel to and from the Marion Transit Center (MTC) that is located within the quarter mile study area. This connection is expected to increase overall system ridership and could also relate to an increase in transit, roadway, and mobility investment using the one-cent transportation tax revenue.

b) Indirect impacts, which are caused by the action but are later in time or farther removed in distance, yet are still reasonably foreseeable. Indirect impacts may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air, water and other natural systems, including ecosystems.

FDOT is completing a Supplemental Environmental Impact Statement (SEIS) for the Tampa Interstate Study (TIS) to evaluate options to make highway improvements to I-275 and I-4 through Tampa. FDOT is working with the Federal Highway Administration (FHWA) on the locally preferred alternative (LPA) for the Downtown Interchange in this area. The LPA consists of operational improvements to the interchange that would not impact the Tampa Streetcar project. A draft SEIS will be made available for public review at a public hearing in early 2020 and a record of decision is anticipated in late 2020. The City of Tampa will continue to coordinate with FDOT throughout the process.

U. Property Acquisition

If property is to be acquired for the project, indicate whether acquisition will result in relocation of businesses or individuals.

The majority of the Tampa Streetcar system, existing and proposed extension, would be within the existing right-of-way. However, there are up to five locations that will require the acquisition or dedication of

property for conversion to right-of-way. These locations are described below and mainly consists of parking lot or sidewalk areas adjacent to the existing right-of-way.

North Florida Avenue south of East Fortune Street – approximately 0.021 acres (920 square feet) may be required to accommodate a proposed stop on the east side of North Florida Avenue just south of East Fortune Street along the proposed extension. This area is currently used as a sidewalk and parking lot, is currently zoned as CBD-1 (Central Business District) and would be converted to right-of-way once acquired.

North Florida Avenue south of East Laurel Street – approximately 0.016 acres (710 square feet) may be required to accommodate a proposed stop on the east side of North Florida Avenue just south of East Laurel Street along the proposed extension. This area is currently used as a sidewalk and parking lot, is currently zoned as CBD-1 and would be converted to right-of-way once acquired.

North Florida Avenue between East Oak Street and East 7th Avenue – approximately 0.007 acres (290 square feet) may be required to accommodate a proposed stop on the east side of North Florida Avenue between East Oak Street and East 7th Avenue along the proposed extension. This area is currently used as a sidewalk and parking lot, is currently zoned as CI (Commercial Intensive) and would be converted to right-of-way once acquired.

Palm Avenue west of North Florida Avenue – approximately 0.005 acres (230 square feet) may be required to accommodate a proposed stop on the north side of Palm Avenue west of North Florida Avenue along the proposed extension. This area is currently used as a sidewalk and parking lot, is currently zoned as CG (Commercial General) and would be converted to right-of-way once acquired.

North Tampa Street south of East Fortune Street – approximately 0.017 acres (750 square feet) may be required to accommodate the proposed guideway, stop, travel lanes and sidewalk on the west side of North Tampa Street just south of East Fortune Street along the proposed extension. This area is owned by the City of Tampa and is currently used as a sidewalk and parking lot, is currently zoned as CBD-1 and would be converted to right-of-way once dedicated.

V. Energy

If the project includes the construction or reconstruction of a building, identify potential opportunities to conserve energy which could be employed. This includes building materials and techniques used for construction; special innovative conservation features; fuel use for heating, cooling and operations; and alternative renewable energy sources.

The present alignment is powered from two 1.5-Megawatt (MW) traction power substations located near the present maintenance facility. The streetcars collect electric power from an OCS using a trolley pole with a current collector that can be a wheel or a sliding 'shoe'.

The OCS installed along the extended alignment will be compatible with a streetcar-mounted pantograph, rather than a trolley pole. The pantograph provides a wider surface for physical contact, accommodates higher operating currents, and can operate in either direction. The overhead contact system along the

existing right of way will be replaced with the same OCS as that to be implemented on the extended alignment to be compatible with pantograph operation.

The change to modern streetcars, and likely shorter operating headways, will increase power demand such that additional substation capacity and feeder cables may be needed on the existing alignment. The need for the added power capacity, if necessary, and its location will become apparent after the load flow studies are performed.

Additional substations will be required to provide power along the proposed extension. These substations will be placed within existing public right-of-way along Florida Avenue, one beneath the Selmon Expressway overpass and the other beneath the Interstate 275 overpass. Subject to performing more detailed analyses, it is anticipated that the capacity of these substations will be in the range of 500 kW to 750 kW. The number of substations required, location, and power capacity, as well as the sizing of any parallel feeders, will become better defined when traction power load studies are performed and the operating parameters become clearer. The project power requirements and additional substations needed will be coordinated with TECO.

W. Public Involvement

Describe public outreach efforts undertaken on behalf of the project. Indicate opportunities for public meetings (e.g. board meetings, open houses, special hearings). Indicate any significant concerns expressed by agencies or the public regarding the project.

The feasibility study has included extensive public engagement outreach to multiple agencies and stakeholder groups. Outreach and engagement activities conducted from inception of the study through the selection of the preferred project alternative included the following:

- **Project Branding.** At the onset of the study, the City undertook a project branding effort. A logo and other branding materials were developed for use throughout the study.
- **Project Website**. The City created a project specific webpage on the City's website: www.tampagov.net/streetcar. The webpage was frequently updated and provided details about the study, frequently asked questions, a study schedule, documents and relevant studies or plans, presentation materials from the public meetings held during the study, an interactive survey, and an on-line comment form. Comments received via the on-line comment form are provided in a Public Engagement & Agency Outreach Summary report. The City also created a project email address: streetcar@tampagov.net.
- **Social Media**. Existing City of Tampa social media channels were used to share important information with residents and stakeholders. Notifications about the study and information about the public meetings were shared on the City's Facebook and Twitter accounts.
- **Presentations, Briefings, and Small Group Meetings.** Several presentations, briefings, and small group meetings were held with local property owners, community groups, and others with an interest in the project. These meetings provided opportunities for staff and project team members to educate participants and solicit feedback on the project.
- **Stakeholder Meetings.** Two key stakeholder meetings were held primarily with City and county agency representatives to share project information and provide opportunities for participants to

voice comments and concerns. The first stakeholder meeting took place on March 23, 2017. The second stakeholder meeting took place on April 6, 2017. Both meetings were held at the Tampa Municipal Office Building. At these initial meetings stakeholders received an update on the study goals and schedule, and a report on initial findings from the project context assessment. A third stakeholder meeting was held on December 12, 2018 to review the preferred project alternatives.

- **Public Workshops.** Five large-scale public workshops were held to provide information and solicit input. The meetings were publicized through news release to local media, via social media, and with targeted email notices to key stakeholders. The City also created public Facebook Events for all of the workshops, which were pushed to the news feeds of anyone who follows the City of Tampa's Facebook page.
    - The first public workshop focused on purpose and need and was held on March 7, 2017 from 5:30 to 7:30 p.m. at the Tampa Bay History Center. Approximately 100 participants attended.
    - The second public workshop focused on corridor options and was held on April 4, 2017 from 5:30 to 7:30 p.m. at the Tampa Bay History Center. Approximately 60 participants attended.
    - The third workshop was a results roundtable and was held on May 2, 2017 from 5:30 to 7:30 p.m. in the Ybor Room at the Hillsborough Community College, Ybor City Campus. Approximately 80 participants attended.
    - The fourth public workshop introduced the draft preferred alignment and was held on October 24, 2017 from 5:30 to 7:30 p.m. at the Chester H. Ferguson Law Center which is located in a minority area and adjacent to a low-income area. Approximately 55 participants attended.
    - The fifth public workshop was held to review preferred project alternatives on December 12, 2018. This workshop was organized as a presentation followed by an open house, and took place at the Tampa River Center at Julian B. Lane Park is located in a minority area and adjacent to a low-income area. Approximately 100 participants attended.
- **Online Survey.** The City conducted an on-line survey asking residents about their thoughts on the InVision: Tampa Streetcar project. Eight hundred and thirty-five (835) people responded to the on-line survey, which was open from February 23 through March 27, 2017 on the study website.
- **Media Coverage.** Local news media coverage was extensive and numerous stories and articles were written in support of the project and about the public meetings that were held.

For more detailed information on public engagement activities, please refer to the full report—Public Engagement & Agency Outreach Summary—on the City of Tampa's InVision: Tampa Streetcar project website at www.tampagov.net/streetcar.

X. Mitigation Measures

Describe all measures to be taken to mitigate project impacts.

Mitigation measures based on the traffic impacts are included in the Lane Elimination Study and Study Area Traffic Impact Analysis that have been submitted to FDOT District 7 and FDOT Central office. Mitigation measures related to traffic impacts are anticipated to include the following:

- Implementation of City of Tampa Smart Mobility Division ATMS plan to optimize intersection system and integrate vehicular and streetcar operation
- Dedicated signal phase for the streetcar (to be integrated into the ATMS)

The Lane Elimination Study and Study Area Traffic Impact Analysis are attached as ATTACHMENT 2.

Mitigation measures for historic and cultural resources are described below.

- For disturbances planned in the section of Florida Avenue south of Whiting Street, where human remains are known to lie immediately beneath the proposed track alignment, controlled archaeological excavations should first be carried out to the planned depth and extent of disturbance. If unmarked human burials are encountered all work should stop, following the proposed Procedure for Discovery of Unmarked Human Burials provided in the CRAS. Similar caution and procedures should be taken when disturbing any subgrade surfaces in the vicinity of known or predicted unmarked human burials or other disturbed human remains. In these areas, archaeological testing should be carried out in advance of any proposed ground disturbance. All work should be monitored by a qualified archaeologist familiar with the appearance of historic burials, and grave features. If possible, Stream-C Ground Penetrating Radar (GPR) survey may be employed to delineate the location of any existing burials before the outset of work. Stream C, a multi-antennae radar system, may have the ability to discern any possible underlying graves beneath road surfacing and utilities.

- Each potential streetcar stop location should be tested for significant archaeological deposits during the removal of slab/road surfaces. The removal of asphalt/brick/slab surfaces around proposed stops should be monitored by an archaeologist, and shovel testing should be carried out beneath the exposed footprint of the stops. All work should be monitored by a qualified archaeologist familiar with the appearance of historic burials, and grave features.

- The alignment and proposed stop near East Jackson Street lie directly on top of the Quad Block archaeological site (8HI00998) and abuts the location of previously recorded human remains. Caution should be exercised during any work undertaken in this area for either the alignment or proposed stops and impacts minimized. Archaeological testing should be carried out in advance of any proposed ground disturbance. If ground disturbance is to be undertaken, then additionally, all work should be monitored by a qualified archaeologist familiar with the appearance of historic burials, and grave features.

- NRHP-listed or eligible above-ground resources have been identified along or adjacent to the proposed extension alignment, proposed stop, existing alignments, and the existing VMSF. A separate Determination of Effects Report will be prepared, and will include analysis of effects to all relevant NRHP-eligible or NRHP-listed resources identified within the APE and focus on the discussion of effects that the project improvements will have on those above-ground resources.

The CRAS completed for the Tampa Streetcar Project is provided as ATTACHMENT 6.

Y. Other Federal Actions

Provide a list of other federal NEPA actions related to the proposed project or in the vicinity.

N/A

Z. State and Local Policies and Ordinances

Is the project in compliance with all applicable state and local policies and ordinances?

☐ *No, describe noncompliance:*

☒ *Yes*

The Tampa Streetcar project is in compliance with all applicable state and local policies and ordinances.

AA. Related Federal and State/Local Actions

☐ Corps of Engineers Permit (Section 10, Section 404)
☐ Coast Guard Permit
☐ Coastal Zone Management Certification
☐ Critical Area Ordinance Permit
☐ ESA and EFH Consultation
☐ Floodplain Development Permit
☐ Forest Practice Act Permit
☐ Hydraulic Project Approval
☒ Local Building or Site Development Permits
☐ Local Clearing and Grubbing Permit
☐ National Historic Preservation Act-Section 106 consultation
☒ National Pollutant Discharge Elimination System General Construction Permit
☐ Shoreline Permit
☐ Solid Waste Discharge Permit
☐ Sole Source Aquifer Consultation
☐ Section 4(f) (Historic or Recreational Properties; Wildlife Refuges)
☐ Section 6(f) (Recreational Properties)
☐ Section 106 (Historic Properties)
☐ Stormwater Site Plan (SSP)
☒ Temporary Erosion and Sediment Control Plan (TESC)
☐ Water Rights Permit
☐ Water Quality Certification—Section 401
☐ Tribal Consultation or Permits (if any, describe below)
☒ Other

Others (describe as applicable):

- Historical and Archaeological Assessment under City of Tampa Ordinance 8249-A (City Resolution 93-853)

ATTACHMENT 2

Study Area Traffic Impact Analysis and Lane Elimination Study

ATTACHMENT 3

Florida Clearinghouse Project Review

ATTACHMENT 4

Contamination Assessment Technical Memorandum

ATTACHMENT 5

Noise and Vibration Technical Study Report

ATTACHMENT 6

Cultural Resource Assessment Survey