



## Safe Access to Parks

### Copeland Park

Regional Park Pilot

Final Existing Conditions

*August 2021*

SAFE STREETS NOW



Hillsborough TPO  
Transportation  
Planning Organization



## Contents

I. Introduction .....	2
A. Park Selection Process .....	2
II. Park Description .....	3
III. Transportation Setting .....	6
A. Key Streets .....	6
B. Transit Access .....	14
C. Population Characteristics .....	15
D. Other Area Studies .....	16
IV. Travel Characteristics .....	17
V. Collision Assessment .....	23
VI. Key Findings .....	29



## I. Introduction

The Hillsborough Transportation Planning Organization (TPO) is conducting a Safe Access to Parks pilot project (project or pilot) to develop a process that can be replicated at parks throughout the County to implement safety countermeasures with a focus on speed management. A toolbox of safety countermeasures, building on the 2019 *Speed Management Action Plan*, will be developed as part of this process. This pilot project includes three different types of park facilities in Hillsborough County, including a local, regional, and linear park whose context and transportation safety issues broadly represent other facilities in the region, such that the findings from this pilot project can be applied elsewhere in the County.

The project scope includes the following task:

1. Identify parks to include in the pilot project
2. Conduct a detailed existing conditions assessment of each park location
3. Solicit public feedback
4. Develop a toolbox of safety countermeasures
5. Apply countermeasures to each park location

This report documents Task 2, the existing conditions assessment.

### A. Park Selection Process

A quantitative process was developed that primarily considered equity and transportation safety metrics to identify candidate parks within Hillsborough County. Of the approximately 230 regional parks within the County, defined as a park greater than 5 acres with a wide range of active and passive amenities, and serving a large population area, **Copeland Park** was ranked one of the highest based on a combination of equity and safety factors. When considering the level of prior investment in the area (minimal), it was selected for inclusion in this

pilot project. Additional details provided are provided in a technical memorandum dated [May 3, 2021](#). Other parks selected for inclusion in the pilot are the Upper Tampa Bay Trail (linear), and Sulphur Springs Park (local), with separate existing conditions assessments prepared for those parks.

This report is organized to provide a description of the park, surrounding roadway and land use context, travel characteristics, and collision assessment. This information will be further refined based on a public outreach campaign to identify transportation concerns that are not readily apparent through traditional data collection approaches.



*Copeland Park Entry on N 15th Street*



## II. Park Description

Copeland Park is located 11001 N 15th Street in the City of Tampa, and is generally bound by E 109th Avenue to the south, N 15th Street to the west, Shaw Elementary School and the 115th Avenue alignment to the north, and a residential neighborhood along the 19th Street alignment, as shown on **Figure 1**, Copeland Park Site Vicinity Map. The park area totals approximately 132-acres and includes a wide variety of amenities, including a nature trail, freshwater pond, and a community center. Other amenities include a pool, gymnasium, basketball courts, tennis courts, racquetball courts, a softball/baseball field, fitness center and exercise equipment along the nature trail. Shaded picnic tables with grills and shelters are provided throughout the park. Operating hours of Copeland Park are from sunrise to sunset.

Primary vehicle access to the park is provided from a driveway on N 15th Street with parking facilities dispersed throughout the park, totaling approximately 225 spaces. A wide variety of parking surfaces are provided, including pavement, grass, and dirt. Secondary vehicle access for park maintenance vehicles is provided from 115th Avenue at the northern end of the park site.



*Park Way Finding*



*Example Parking Area*

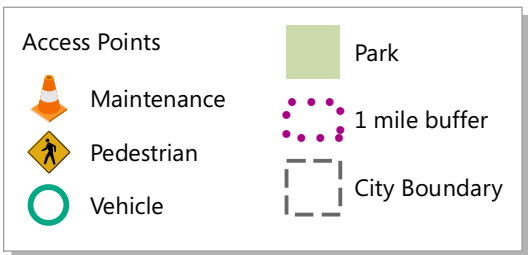
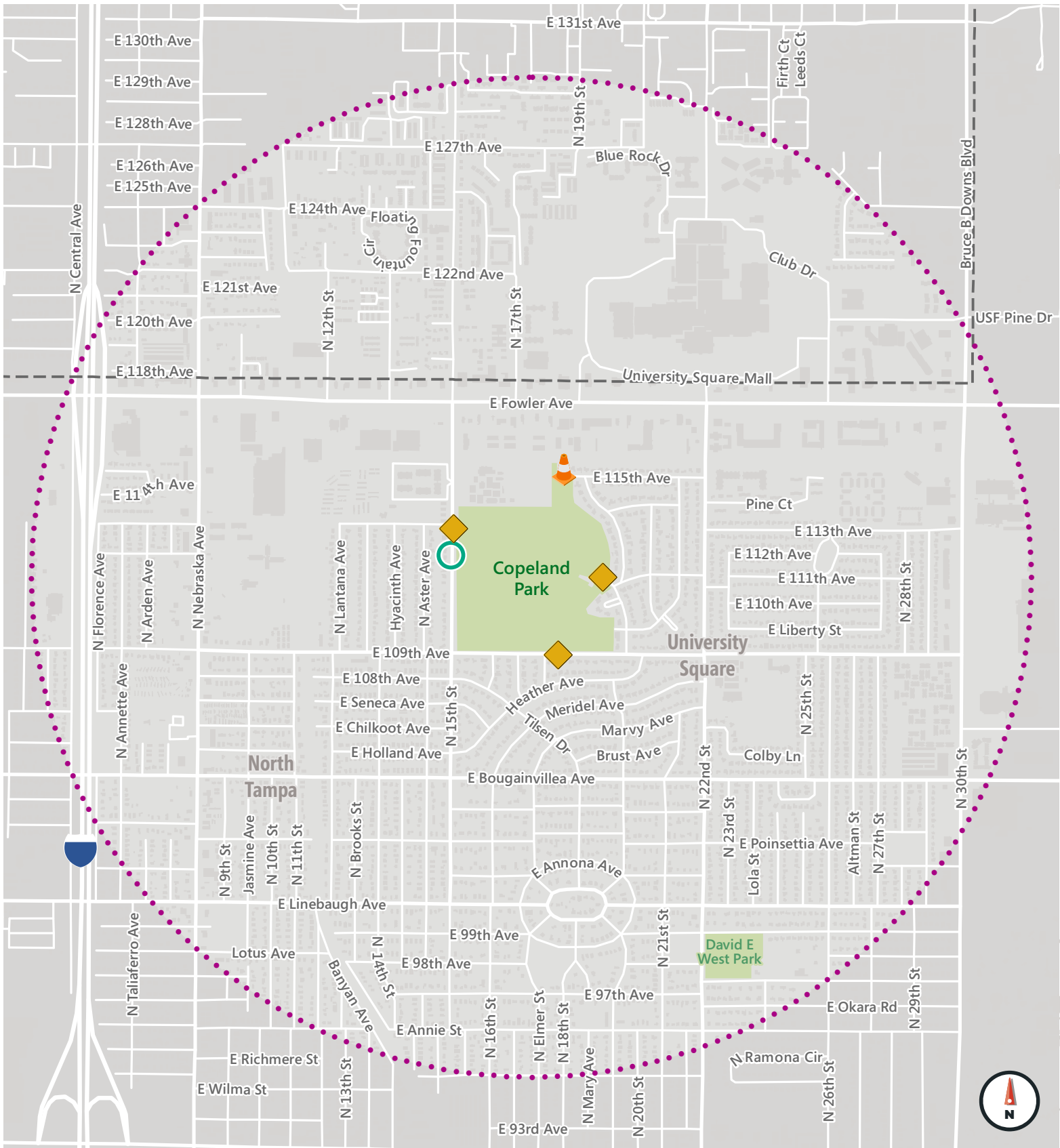


Figure 1  
**Copeland Park  
 Study Area**



Pedestrian access to the park is provided at the end of E 111th Avenue, a path connecting the sidewalk that rings the park to the internal trail system from E 109th Avenue approximately 350 feet east of Jacelyn Street, and from a path connecting from N 15th Street along the E 113th Avenue alignment near the pool. At the primary vehicle entrance, there is a pedestrian connection on the northside of the roadway. For a portion of that connection the sidewalk is flush with the roadway and often covered with pine needles and other debris forcing pedestrians into the travel lane. At the first main internal intersection, the sidewalk ends and there are no other pedestrian facilities, meaning that people walking must share the roadway with vehicles or walk in non-designated trail locations. Figure 1 shows the park access locations.

Hillsborough Area Regional Transit (HART) provides transit service in the area with one route operating along the project frontage and several others operating on surrounding roadways. Additional details regarding transit access to the park and the pedestrian connections are provided in the Park Context section.

Due to COVID-19 restrictions in place at the time of the data collection effort, no scheduled events were occurring at Copeland Park and the pool was closed for annual maintenance. Under more typical conditions, there are many scheduled events and informal activities that draw people from the surrounding area.



*Pedestrian Connection at Main Vehicle Entry Terminating into Travel Lane*



### III. Transportation Setting

This chapter provides an overview of the study area, including a description of the roadway network, transit service, and population characteristics.

#### A. Key Streets

This section includes a description of the roadways that provide primary access to Copeland Park with a focus on roadways that connect and bound the site. **Figure 2** summarizes the Transportation Context, including the locations of signalized intersections, bus stops, sidewalk network and bicycle lanes.

##### N 15th Street

N 15th Street forms the western boundary of Copeland Park. Uses fronting the N 15th Street are primarily residential, with a high number of driveways accessing the roadway where conflicts could occur between people accessing their driveways and people walking, bicycling or driving on the roadway. Most intersections along the corridor are unsignalized, except for the intersections of E Fowler Avenue and E 109th Avenue. These two signalized intersections have crosswalks and pedestrian signals and are spaced almost half a mile apart. N 15th Street is discontinuous to the south at E Annie Street and to the north at E 143rd Avenue.

Key characteristics of N 15th Street include:

- North – South Arterial
- 24-foot typical cross section
- One vehicle travel lane in each direction
- No on-street parking

- Posted speed limit of 30 miles per hour
  - 15 miles per hour in school zone when lights flashing
- No bicycle facilities
- Transit access (Hart Route 45)
- An average of 3,790 vehicle trips per day along the roadway
- Over 200 collisions in the past 5 years
  - 6 collisions resulted in a severe injury or fatality (KSI)
  - 3 fatal collisions
  - Around 16 collisions involving a vulnerable road user (bicyclist, pedestrian, motorcyclist)

During the data collection effort, the following was observed about the condition, design and operation of N 15th Street:

- Sidewalk widths varying between 4 to 5 feet; the City of Tampa requires that all new sidewalk be at least 5 feet wide and a 6 foot or greater width sidewalk is recommended for two-way pedestrian travel.
- Presence of sidewalks is inconsistent which creates gaps in the walking network and introduces the potential for additional conflicts between people walking and people driving. An example is on the west side of the road between E 108th Ave and E. Seneca where the sidewalk was eliminated to allow for residential parking spaces.
- Some locations have a 4 to 5-foot grass strip separating the vehicle travel way and the sidewalk; however, the landscaping is poorly maintained and was observed to serve as vehicle storage during field observations. Litter and other debris were also observed in the landscape strip and sidewalk, creating obstacles for people walking, bicycling or using mobility devices.

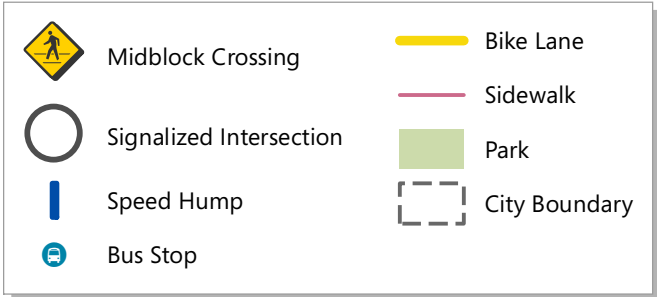
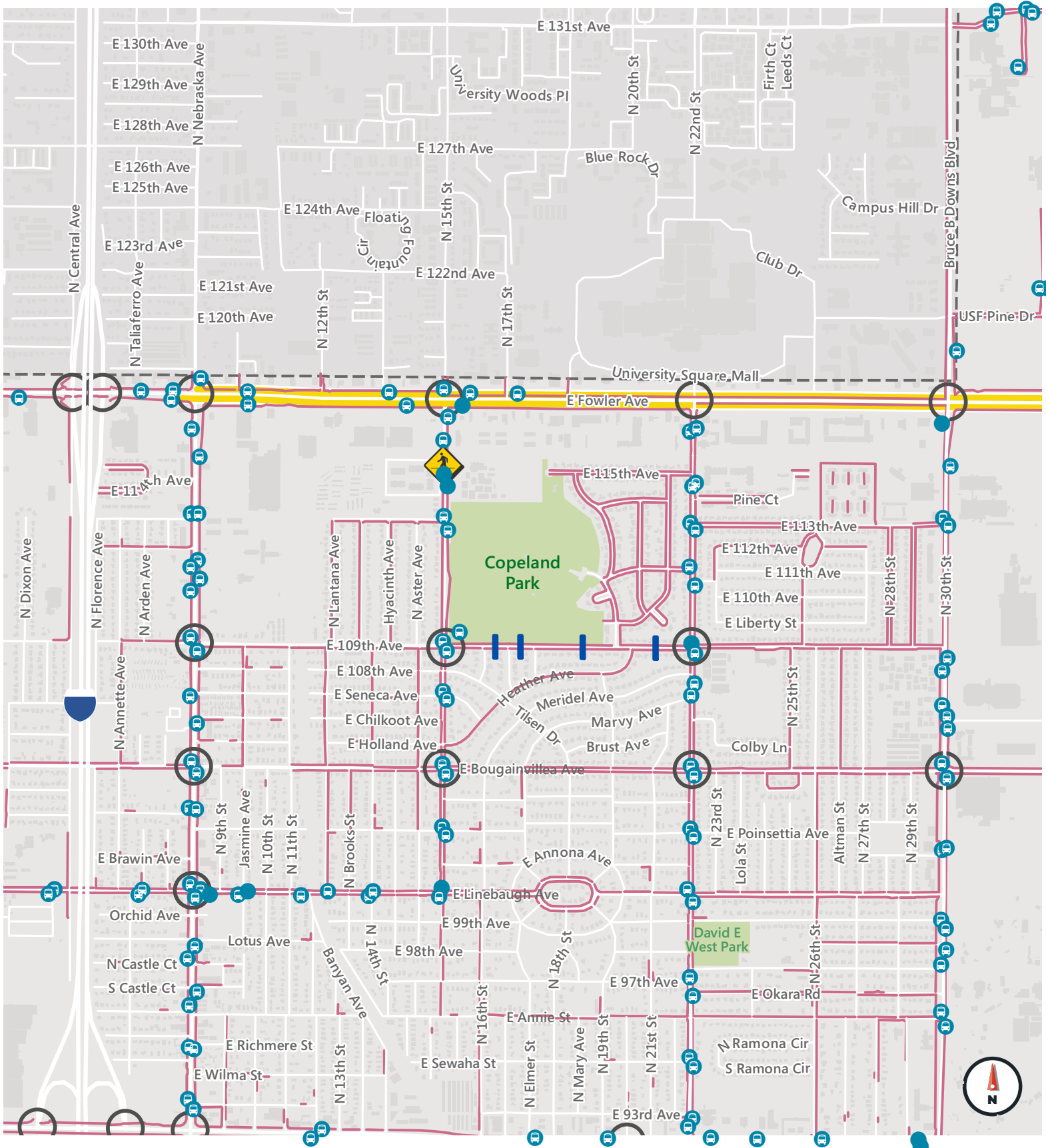


Figure 2  
**Copeland Park**  
**Transportation Network Elements**





- Curbs and gutters, which provide additional separation between people driving and people walking, and help with drainage, are not consistently provided in the area. As field observations were conducted during the dry season, the public outreach campaign will include questions related to street flooding that can impair mobility options during or after rain events.
- Curb ramps and pedestrian pushbuttons do not appear to meet current ADA standards at some intersections along the corridor. The grades of some ramps appear to be too steep and occasionally do not align with the opposite corner. At the signalized intersection of N 15th Street and E 109th Ave, only one pedestrian pushbutton is provided at each corner, and it is unclear which crossing the button is for; someone with a visual impairment would not be able to easily determine which direction of travel they were requesting the pedestrian crossing.
- Marked roadway crossings are infrequent – approximately 1/4- to 1/3 of mile apart. At this distance, depending on where a



*Marked Crossing at Shaw Elementary School and Regency Square Apartments was installed a few years ago and needs maintenance*

person is on the corridor, the closest designated crossing may be a 3 to 6-minute walk.

- There are no designated bicycle facilities, and given the speed of people driving and the traffic volume, it is uncomfortable for people bicycling to share the lane with people driving, and people were observed bicycling on the sidewalk, which can create added conflicts for people walking.
- The corridor is sparsely landscaped within the public right-of-way, and there is limited tree cover providing shade.
- LED roadway lighting is provided along the westside of N 15th Street along the park frontage and on the eastside of the roadway south of E 109th Avenue. However, pedestrian scale lighting is not provided. Based on the type and placement of streetlights, street and crosswalk lighting may be inconsistent along the park frontage. The public outreach campaign will include a question related to the adequacy of street lighting levels in the area, with a focus on pedestrian crossing locations.
- HART operates Route 45 along N 15th Street. The transit stop facilities vary greatly along the corridor from signs with no additional amenities to shelters with seating and trashcans.



*Typical Transit Stop*



- The railroad crossing on N 15th Street approximately 480 feet south from the intersection with E Fowler Avenue creates a barrier to non-auto travel in the area. It is a single-track crossing with single gate arms and flashing warning devices; pedestrian gates and warning devices are not provided. Given the condition of the pavement, this crossing could be particularly challenging for someone in a wheelchair to navigate, or someone pushing a stroller and creates barriers to accessing the Copeland Park.



*Railroad Crossing on N 15th Street*

### ***E 109th Avenue***

E 109th Avenue forms the southern boundary of Copeland Park. Uses fronting the street are residential, with driveway presence and spacing similar to N 15th Street. Most intersections along the corridor are unsignalized, with the exception of N Nebraska Avenue, N 15th Avenue and N 22nd Avenue. E 109th Avenue is discontinuous to the west at I-275 and terminates to the east at N 30th Street.

Key characteristics of E 109th Avenue include:

- East – West Collector
- 22-foot typical cross section
- One vehicle travel lane in each direction
- No on-street parking
- Posted speed limit of 30 miles per hour
- No bicycle facilities
- No transit service
- An average of 2,080 vehicle trips per day along the roadway
- About 60 collisions over the past 5 years
  - 3 collisions resulted in a fatality or severe injury
  - 5 collisions involving a vulnerable road user



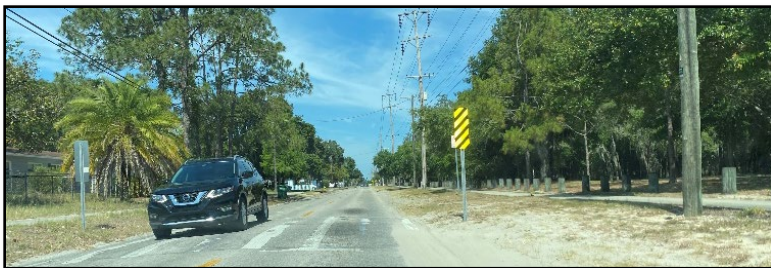
During the data collection effort, the following was observed about the condition and design of E 109 Street:

- Most intersections are side-street stop-controlled, meaning that traffic on E 109th Avenue does not stop. Many intersections lack stop bars behind the unmarked pedestrian crossing.



*Typical Intersecting Street of E 109th Avenue*

- Five speed tables are located along E 109th Avenue between N 15th Street and N 22nd Street, indicative of past speeding issues along the street. The City of Tampa has received recent complaints related to people driving in excess of the posted speed on E 109th Avenue.



*Speed Table on E 109th Avenue*



*Intersection of N 15th Street and E 109th Street*

- Sidewalks are consistently provided on E 109th Avenue to the east of N 15th Street. To the west of N 15th Street, sidewalks are only provided on the south side of the street. Many connecting streets do not have sidewalks.
- Sidewalks are typically 3 to 5 feet wide, with 3-foot sidewalks on the northside of the street to the east of the park.
- Along the northside of the roadway, there is a 10 to 15-foot landscape and on the southside of the roadway the buffer is approximately 5-feet.
- Similar to N 15th Street, curbs and gutters are not consistently provided in the area.
- Curb ramps and pedestrian pushbuttons do not appear to meet current ADA standards at some intersections along the corridor. Ramp slopes at some locations appear too steep and pedestrian push buttons may be located too far from the crossing. The cross slope on portions of the sidewalk on E 109th Avenue may also not meet ADA requirements.



- Marked pedestrian crossings are provided at N 26th Street, N 22nd Street, N 15th Street and N Nebraska Street. These crossing locations are spaced approximately a quarter of a mile to half mile apart. At this distance, depending on where a person is on the corridor, the closest designated crossing may be a 3 to 8-minute walk.
- A railroad crossing is located on E 109th Avenue approximately 1,500 feet from the intersection with N 15th Street. It is a single-track crossing with single gate arms and flashing warning devices. Grades approaching the crossing do not appear to be ADA compliant.



*Pedestrian Crossing over Railroad Tracks  
Railroad Crossing*

- West of N 22nd Street, LED roadway lighting is typically provided along the northside of E 109th Avenue. East of N 22<sup>nd</sup>, Street high pressure sodium (HPS) lights are still in use. HPS lights do not provide as much illumination as LED lights. Based on the type and placement of streetlights, street and crosswalk lighting may be inconsistent along the park frontage.

### ***N 22nd Street***

N 22nd is the primary north-south roadway to the east of Copeland Park. Uses fronting the street are primarily residential. Most intersections along the corridor are unsignalized, except for E Fowler Avenue, E 109th Avenue and E Bougainvillea Avenue, which are signalized and also have pedestrian signals. N 22nd Street is discontinuous to the north at E Fowler Avenue where it provides access to the University Mall and to the south at Rowlett Park Drive.

Key characteristics of N 22nd Street include:

- North – South Collector
- 20-foot typical cross section
- One vehicle travel lane in each direction
- No on-street parking
- Posted speed limit of 30 miles per hour
  - 15 miles per hour in school zone when lights flashing
- No bicycle facilities
- Transit access (Hart Route 12)
- An average of 7,300 vehicle trips per day along the roadway
- About 140 collisions over the past 5 years
  - 2 collisions resulted in a fatality or severe injury
  - 8 collisions included a vulnerable road user

During the data collection effort, the following was observed about the condition and design of N 22nd Avenue:

- Sidewalks are consistently provided on N 22nd Street, but not on all the connecting streets.
- Sidewalk widths vary from 3 to 5 feet.



- Some sections have a 10 to 12-foot landscape buffer. In a few locations, fences have been built immediately adjacent to the sidewalk. This can make it difficult for two-way pedestrian travel or for pedestrians to walk side by side.



*Fences Along Sidewalk on N 22nd St South of N 115th Ave*

- Curbs and gutters are not consistently provided in the area.
- Curb ramps and pedestrian pushbuttons do not appear to meet current ADA standards at some intersections along the corridor.
- Marked pedestrian crossings of N 22nd Street are provided at E Fowler Avenue, E 109th Avenue, E Bougainvillea Avenue, and E Linebaugh Avenue. These crossing locations are spaced approximately a quarter of a mile to half a mile apart. At this distance, depending on where a person is on the corridor, the closest designated crossing may be a 3 to 8-minute walk.
- North of E Bougainvillea Avenue, LED roadway lighting is provided along the eastside of N 22nd Street. South of E Bougainvillea Avenue HPS lights are still in use. HPS lights do not

provide as much illumination as LED lights. Based on the type and placement of streetlights, street and crosswalk lighting may be inconsistent along the park frontage.

- A railroad crossing is located on N 22nd Street approximately 480 feet south from the intersection with E Fowler Avenue. It is a single-track crossing with single gate arms and flashing warning devices.
- HART operates Route 12 along N 22nd Street. Transit stop amenities vary greatly along the corridor from signs with no additional amenities to shelters with seating and trashcans.

Other streets in the immediate park vicinity are generally residential streets with posted speed limits of 25 miles per hour that do not provide bicycle facilities and have intermittent sidewalks.

Overall, the condition of the pavement, sidewalks, striping, and curb ramps (where provided) is poor on the collector and neighborhood streets in the vicinity of Copeland Park. There could be an opportunity to incorporate transportation safety improvements in the area along with roadway maintenance activities.

### ***E Fowler Avenue***

E Fowler is located to the north of Copeland Park. Land uses along the corridor are primarily commercial. Buffered bicycle lanes are provided along the roadway and 5-foot buffered sidewalks are provided on both sides of the street. Access management strategies have been employed along E Fowler Avenue to restrict left-turn movements from individual parcels to improve safety along the corridor. E Fowler Avenue creates a significant barrier to people who live or work north of the roadway to access the park, especially using non-auto modes.



Key characteristics of E Fowler Avenue include:

- East-West Arterial
- Four vehicular travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 45 miles per hour
- Buffered bike lanes
- Transit access (Hart Route 275)
- 54,000 vehicles per day on average
- Over 1,300 collisions over the past 5 years
  - 32 collisions resulted in a fatality or severe injury
  - 8 fatal collisions
  - 100 collisions involving a vulnerable road user

During the data collection effort, the following was observed about the condition and design of Fowler Avenue in the vicinity of Copeland Park:

- Long cycle traffic signal cycle lengths, large crossing distance, and long distances between pedestrian crossings (at least a half mile, which could add 5 to 10 minutes to a pedestrian trip across the street) creates a significant barrier to people walking or bicycling.
- Although there is a buffered bike lane, the speed and volume of vehicle traffic makes it an uncomfortable roadway for people bicycling, and an off-street path is the recommended bicycle facility based on the roadway characteristics.
- Although there is a 5-foot sidewalk, it can be difficult to two-way pedestrian travel and for people to walk comfortably side by side. There is minimal landscaping within the public right-of-way to provide shade and protection to people on the sidewalk.

- HART operates Route 275 along E Fowler Avenue. This is an express route, with a limited number of stops along the corridor. There is a stop located at N 15th Street at E Fowler Avenue, approximately a quarter of a mile north of Copeland Park. The stops on both sides of the roadway have a shelter, benches, and trash cans.



*Transit Stop on E Fowler Avenue*



**B. Transit Access**

Transit access to the Copeland Park area is provided by HART, with three routes serving the study area, as summarized in **Table 1**. Stops in the area were shown previously on **Figure 2**. Route 45 directly serves Copeland Park and operates along N 15th Street, connecting the University of South Florida to Westshore Plaza. Route 12 operates along N 22nd Street connecting the area to Downtown Tampa, while Express Route 275 with stops on E Fowler Avenue, serves the Wiregrass area to University Area to Downtown Tampa.

Transit stops in the area provide a range of amenities, with some being well equipped with shelters, benches and trash receptacles, while many are a pole indicating a stop location. Many transit stops are not co-

located with pedestrian crossings of the roadway. Many stops are also not easily accessible for people with mobility impairments due to inadequate pedestrian connections to the stop and debris in the pedestrian path of travel.

**Table 1: Local Transit Options**

Route	Operating Hour (to nearest half hour)	Frequency	Closest Stop Location	Destinations Served
12	M-F: 4:00 AM - 1:00 AM Sat-Sun: 6:00 AM - 11:00 PM	30 minutes 30 minutes	N 22nd Street	Downtown Tampa to University Area
45	M-Sun: 4:30 AM - 10:30 PM	30 minutes	E 15th Street	University Area to Westshore Plaza
275 (ExpressRoute)	M-F: 5:00 AM - 11:00 PM Sat-Sun: 5:30 AM - 11:00 PM (limited stops)	1 hour 1 hour	E Fowler Avenue	Wiregrass to University Area to Downtown Tampa

Source: HART, 2021.

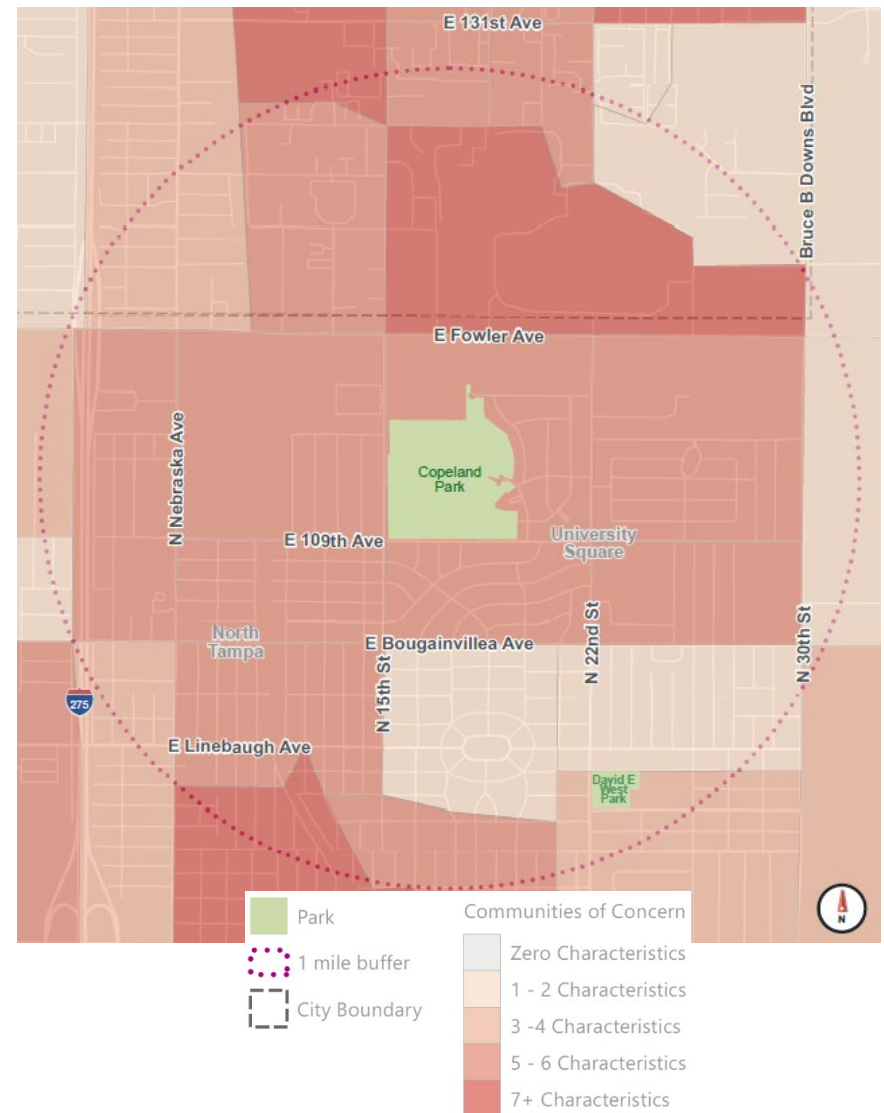


### C. Population Characteristics

The park selection process focused heavily on equity metrics as defined by the Hillsborough Community of Concern definitions, with the area around Copeland Park meeting criteria in all categories being at least one or more standard deviations above the County median.

- Percent minority population
- Limited English proficiency households
- Low Income Households
- Households living with a disability
- Zero vehicle households
- Percent of residents who are under 18-years old
- Percent of residents who are over 65-years old

The TPOs *Vision Zero Action Plan* and other recent studies have shown the people living in communities of concern are significantly more likely to be involved in a traffic collision that results in a severe injury or a fatality. As this area has a higher-than-average population of households without a vehicle, and a high population of people under the age of 18, the park is likely a major walk/bike destination for people residing in the surrounding vicinity. Improving the safety of roadways in the area, with a focus on people walking and bicycling, can help improve safety outcomes for the area.



Communities of Concern in Study Area  
Source: Hillsborough TPO





### D. Other Area Studies

The City of Tampa, the Florida Department of Transportation (FDOT) and the Hillsborough TPO are preparing related studies for roadways within the general study area. A corridor study was recently completed for the section of N 15th Street between Fowler Avenue and Fletcher Avenue as it was identified as one of Hillsborough County's Top 20 [Vision Zero Corridors](#) in the High Injury Network. Public feedback and projects identified through the course of that corridor plan will be considered in this effort, which has identified several locations for the installation of enhanced pedestrian crossings of N 15th Street and improved sidewalks.

FDOT recently completed a [University Area Multimodal Feasibility Study](#) that identified improvements on Fowler Avenue between I-275 and I-75 that include the provision of bus rapid transit, a separated bicycle facility, and improved pedestrian connections. Near-term improvements have been identified, including improvements at N 15th Street that would reduce the crossing distance of N 15th Street, and decrease the corner radius to slow the speeds of vehicles turning from N 15th Street to Fowler Avenue.

The City of Tampa is currently preparing an update to their [Parks and Recreation Master Plan](#), which includes a robust public engagement process. One of the key themes heard from the public was a desire for improved connections for people walking and bicycling to parks, including a dedicated off-street trail facility to connect neighborhoods south of Copeland Park to the University of South Florida.

The Hillsborough TPO is in the process of preparing a [University of South Florida to Green ARtery Trail](#) study that is evaluating the conceptual and new connections from the University area to the existing and proposed trail system in Tampa and Hillsborough County. Three potential



*Potential Improvements at N 15th Street at Fowler Avenue*  
Source: Hillsborough TPO

alignments are currently under consideration, one alternative would provide a trail along N 15th Street from Linebaugh Avenue to Fowler Road. A second alternative would provide a trail along the N 22nd Street Corridor, and a third would provide a trail along the N 30th Street Corridor. While the N 15th Street alignment would provide the best opportunity to enhance connections to the park for people walking and bicycling, the other trail alternatives coupled with improvements along E 109th Avenue and Fowler Avenue would also improve the overall levels of accessibility to the park.

The [City of Tampa Mobility Plan](#) identified the provision of shared lane markings on E 109th Avenue between Nebraska Avenue and 30th Street.



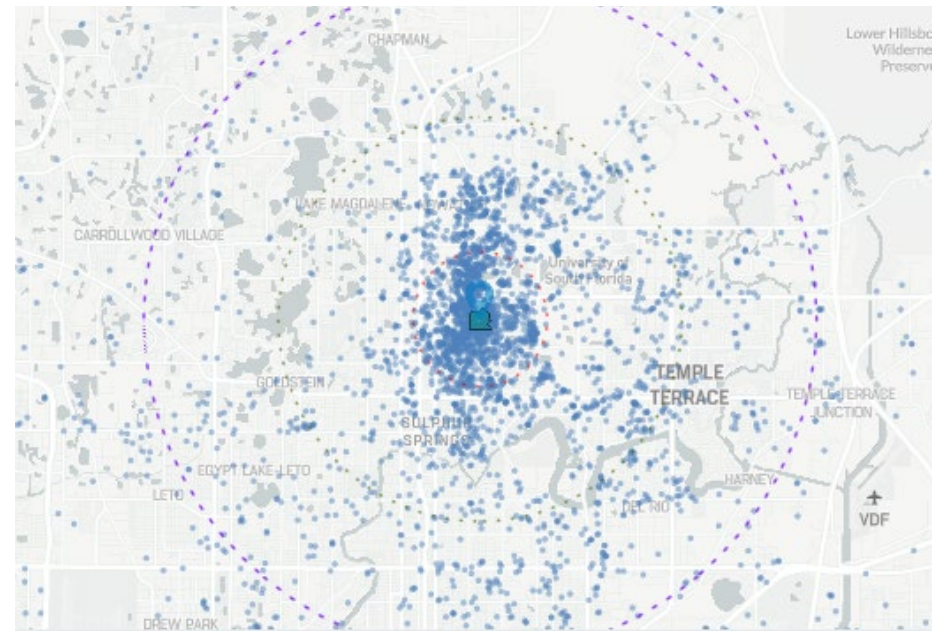
### IV. Travel Characteristics

Data from a wide variety of sources was reviewed to help create a profile of travel characteristics to and from Copeland Park to aid in the identification of transportation safety concerns and potential counter measures. Location based mobile data was used to identify the catchment area of park visitors. As shown to the right, most park visitors are within a one-mile radius of the park during daytime hours, with the vast majority of visitors within a 3-mile radius of the park.

A review of common routes that people take to access the park shows that many park visitors come from adjacent neighborhoods (with the potential to be walk or bike trips), and many trips route on E Fowler Avenue, E 109th Avenue, E Bougainvillea Avenue, Nebraska Avenue, N 15th Street, N 22nd Street, and N 30th Street. Therefore, the focus on safety counter measures should be on these major streets and the minor connecting roadways.

Copeland Park receives the most visitors on Saturday and Sunday, with 35 percent of all visits occurring on those two days combined. The park sees pretty consistent levels of activity between 7 AM and 7 PM, with the highest levels of activity around mid-day (11 AM to 2 PM) and in the late afternoon, early evening (4 PM to 7 PM).

[Wejo](#) data, reflective of conditions from October 2019, was obtained to document average and 85th percentile travel speeds on roadways surrounding the park, and to identify hot spots where hard braking routinely occurs. **Hard braking** is an event where a driver applies more force than is typically needed to slow or stop a vehicle using the vehicle's **brake** system, defined as reducing your speed by more than 6.5 miles per hour per second. Hard braking can reduce a driver's ability to respond to other roadway hazards and can result in rear-end



*Common Daytime Locations of Park Visitors (Source: Near, formally UberMedia)*

crashes if other people driving are not prepared for the hard-breaking event.

This data was obtained from on-board vehicle sensors, including devices that are built into the vehicle that provide data to the vehicle manufacturer and devices that are installed by the vehicle owner, such as for monitoring fleet vehicles, and from insurance companies for use in monitoring driver behavior and providing insurance discounts/setting premiums. While this data set is limited to those who have such devices on their vehicles, it does provide data over a longer period of time that can be stratified by day of week and time of day. The dataset used in the speed analysis is based on 28,099,877 observations, and hard braking analysis is based on 191,432 observations. All data is anonymous and cannot be traced back to any individual roadway user.



The speed data can be used to determine if there are specific roadway segments where people drive routinely in excess of the posted speed limit, and if prevailing travel speeds are more likely to result in a serious or fatal injury if the collision involves a vulnerable roadway user. A pedestrian struck by a vehicle being driven at 20 miles per hour has more than a 90 percent chance of survival, while the same pedestrian struck by a vehicle being driven at 40 miles per hour has a less than a 10 percent survival rate.

The wejo data shows that the **average** daily travel speed on roadways that directly bound the park (N 15th Street and N 109th Avenue) is around 20 miles per hour (the posted speed limit is 30 miles per hour), with an 85th percentile speed closer to 30 miles per hour. However, this travel speed also incorporates delay that people driving experience at controlled intersections, when stopped behind a bus, or slowing to allow someone to turn into or out of their driveways, meaning that for some portions of the roadway, people are driving above the posted speed limit. During peak hours, the prevailing travel speed is around 30 miles per hour. The 85<sup>th</sup> percentile daily travel speed on E Bougainvillea Avenue is over 30 miles per hour, in excess of desired speeds for people driving on a local residential street, especially considering that this travel speed is over a several block distance and includes delay experienced at intersections.

The data was also reviewed to assess what percent of daily travel was at least 10 miles per hour in excess of the posted speed limit. Fowler Avenue experiences the most people driving more than 10 miles over the speed limit, with more than 4 percent of AM peak hour travel and over 1 percent of daily travel at speeds 10 miles per hour or more in excess of the posted speed limit.

The City of Tampa is undertaking an evaluation to reduce the posted speed limit on all local streets to 25 miles per hour. The change in

posted speed limit should also be accompanied by design changes to reinforce the slower speeds.

The hard-breaking data shows that there are hot-spots of hard breaking along Fowler Avenue and 30th Street. The hard-breaking locations can be indicative of locations with potential sight distance limitations and other roadway design elements that do not provide consistent feedback to people driving alerting them to potential hazards that may require evasive maneuver.

The speed data is summarized on **Figure 3** for the daily condition and **Figure 4** for the peak hour condition. The hard-breaking data is summarized on **Figure 5**.

Available traffic count data was reviewed for roadways that provide primary access to Copeland Park, as summarized in **Table 2**, along with the number of travel lanes, roadway classification, speed limit and observed 85<sup>th</sup> percentile speed. The collector roadways in the area experience traffic volumes well within the expected range for a collector roadway, although the traffic volumes are on the higher end of the desired range for a residential street, which is the dual purpose of many of these streets, including N 15th Street, N 22nd Street, and E Bougainvillea Street. Speeds on these roadways are also higher than is desired on a residential street where there can often be conflicts between people accessing residential driveways, people playing outside, and through vehicle travel.

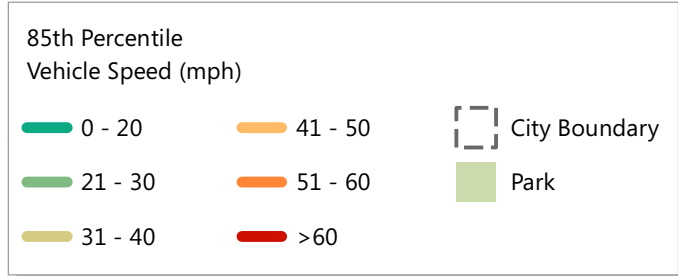
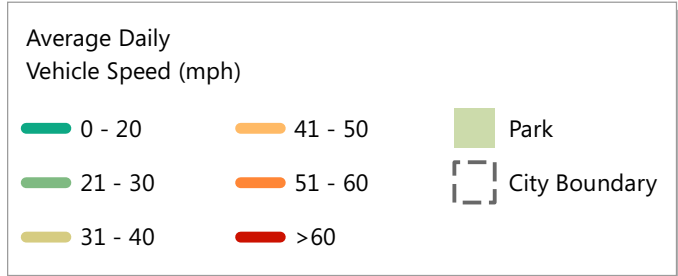
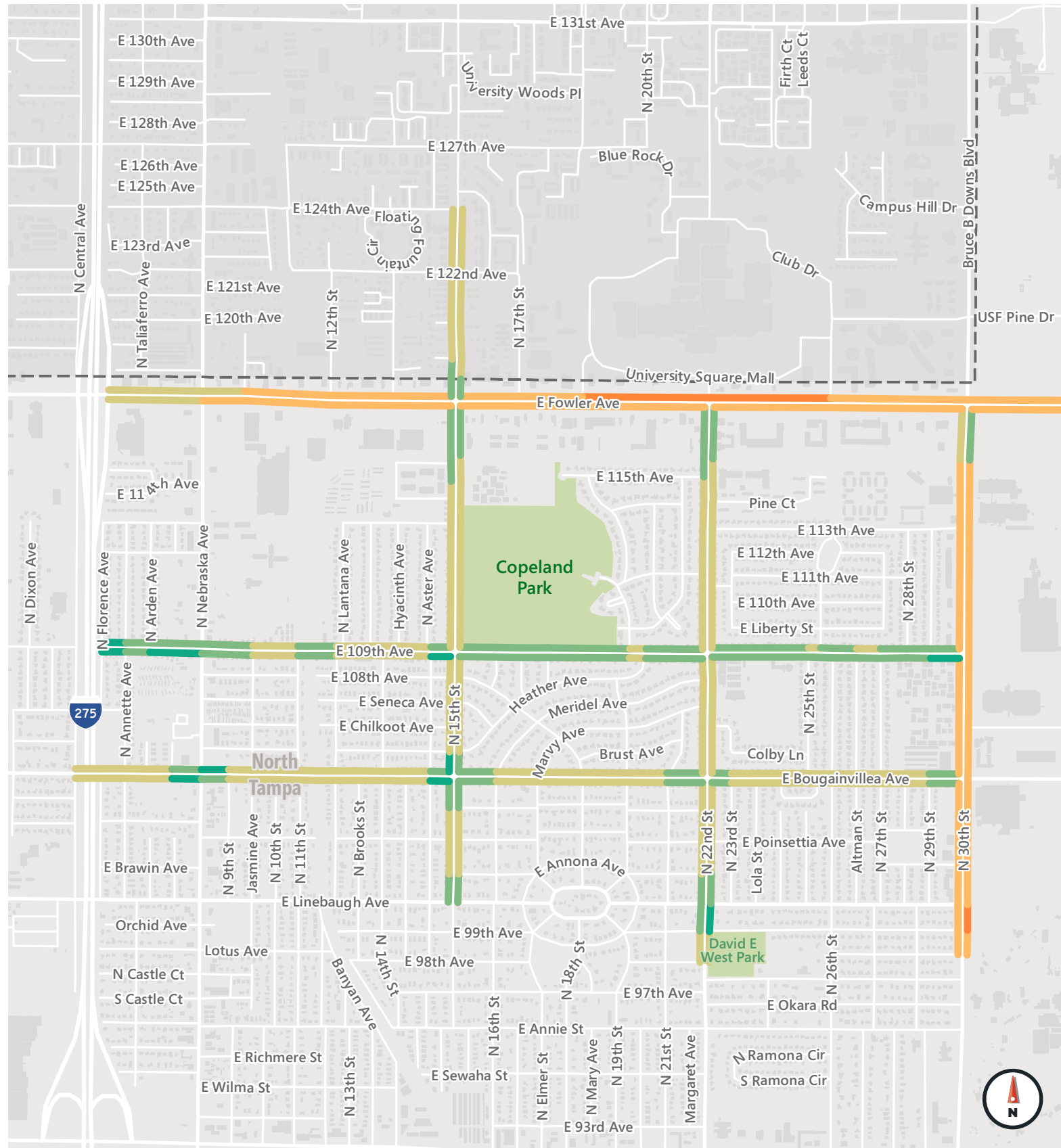
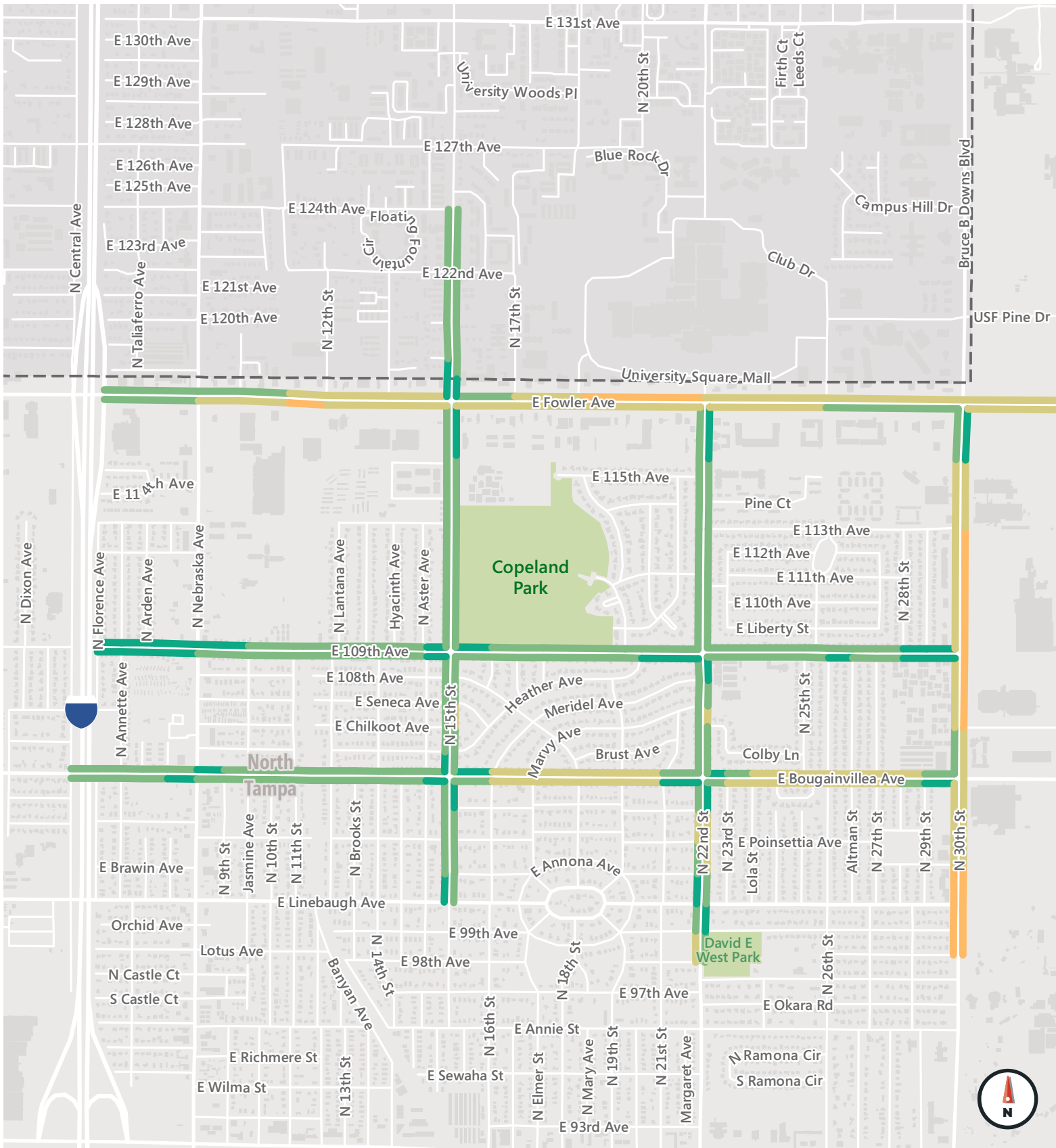


Figure 3  
**Copeland Park  
 Vehicle Speed Data**

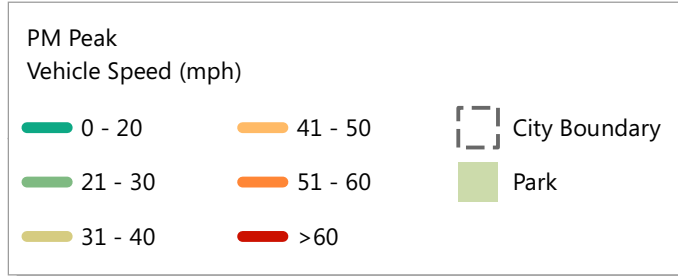
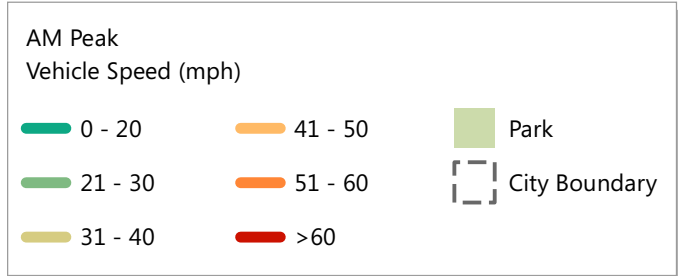
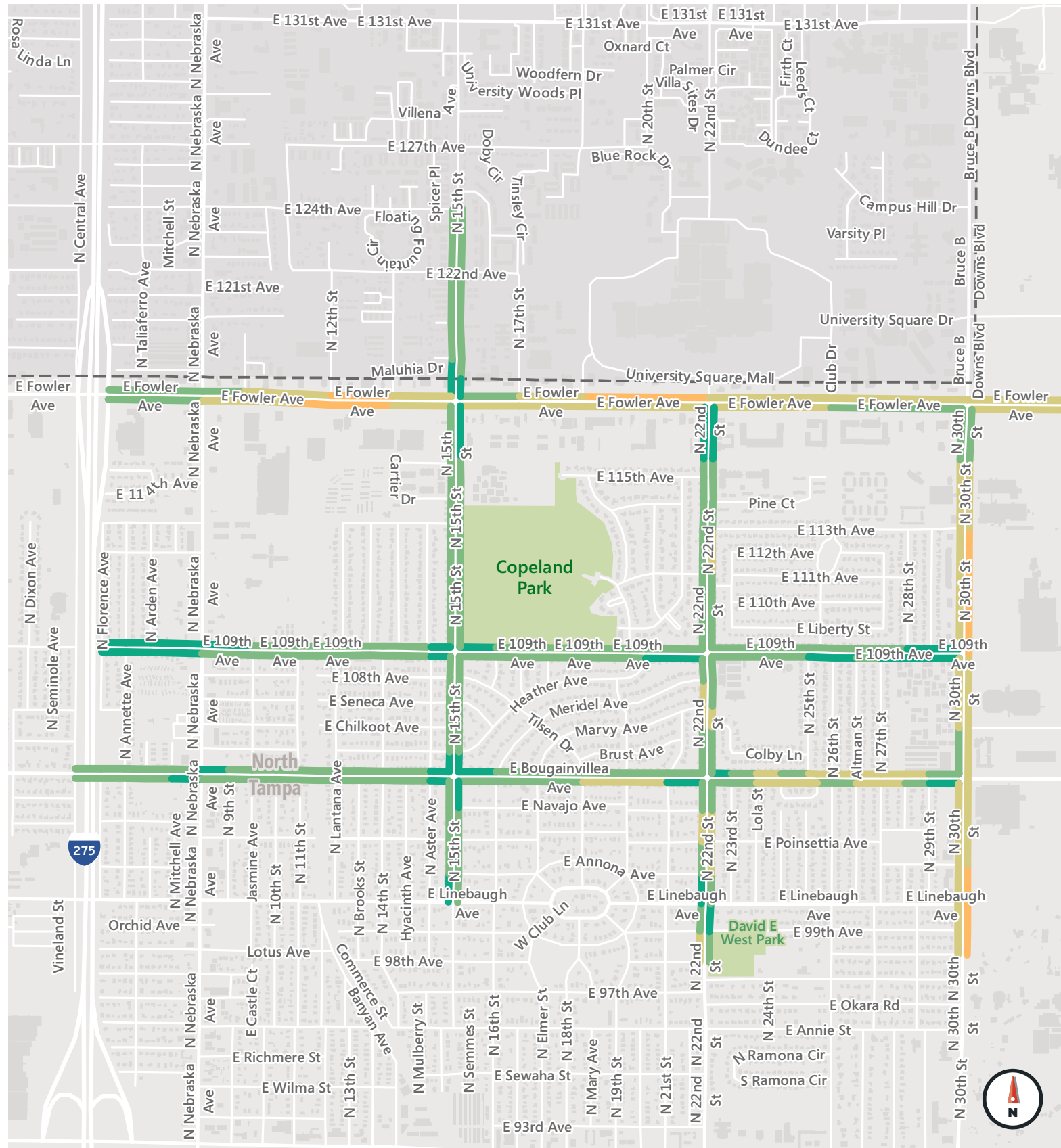
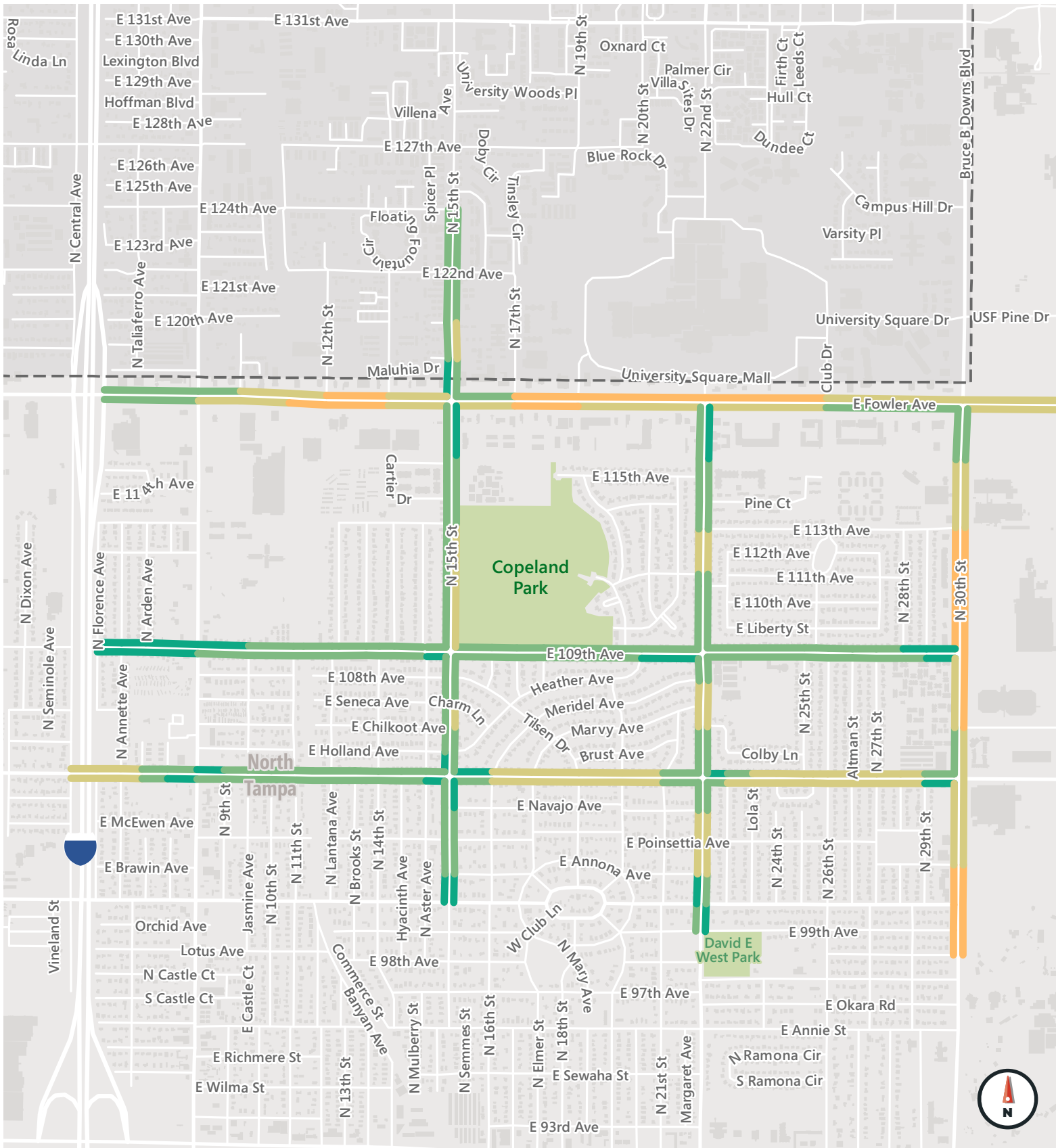


Figure 4  
**Copeland Park AM & PM Peak Vehicle Speed**

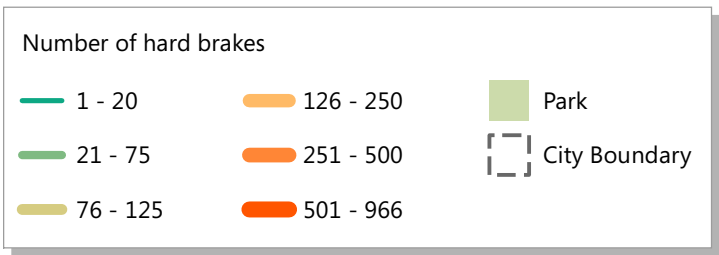
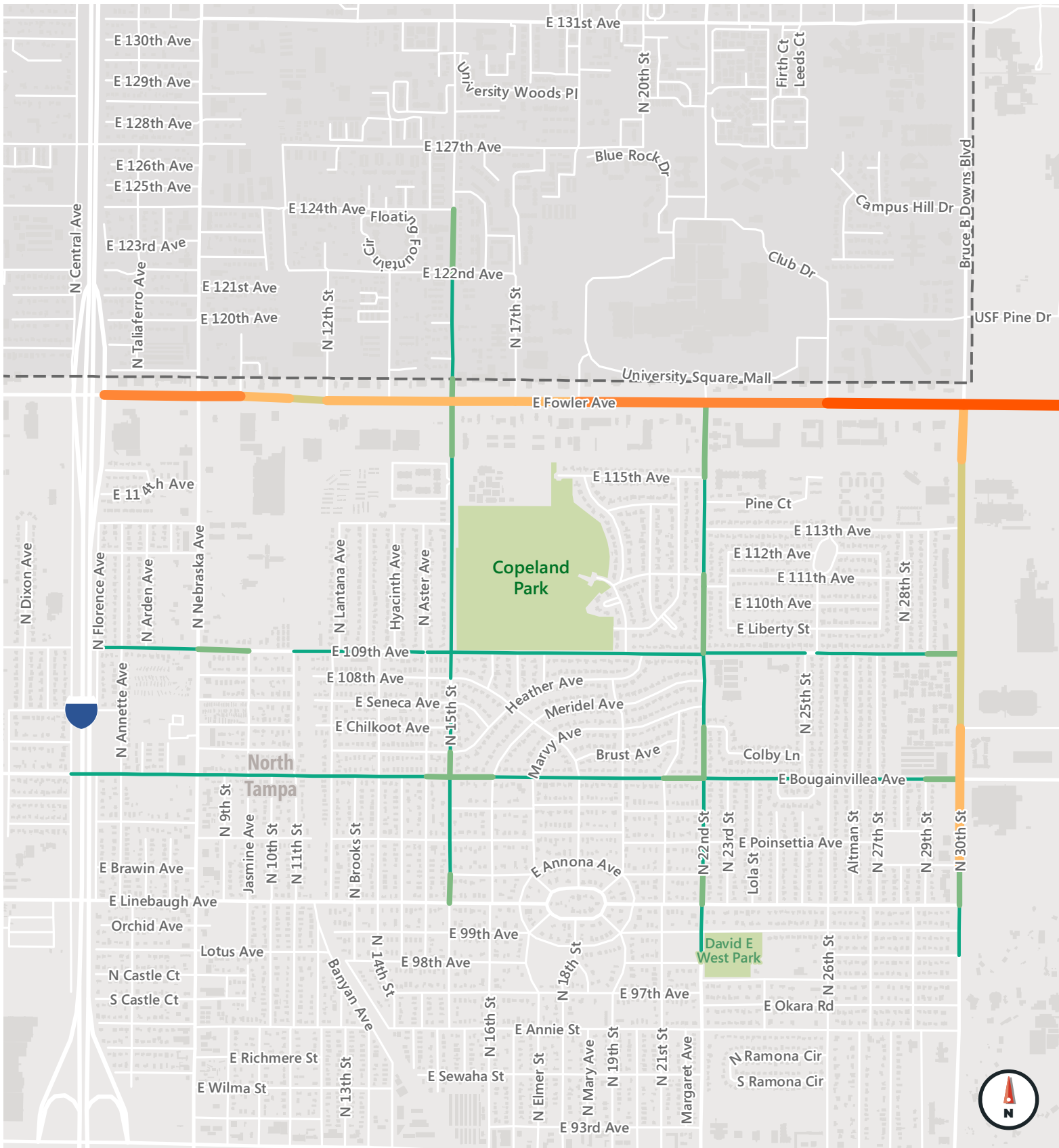


Figure 5  
**Copeland Park  
 Hard Braking**



**Table 2: Roadway Volume and Speed Summary**

Roadway	Classification	Lanes	AADT	Speed Limit	Average Speed	85 <sup>th</sup> Percentile Speed	Percent of Daily trips at speeds ≥ 10 miles above speed limit
15th Street (Linebaugh to Bougainvillea)	Collector	2	3,790	30	23	26	0.00%
15th Street (Bougainvillea to Fowler)	Collector	2	3,720	30	22	27	0.03%
22nd Street (109th to Fowler)	Collector	2	7,300	30	23	30	0.20%
30th Street (Busch to Fowler)	Arterial	4	25,900	45	31	37	0.05%
Fowler Avenue (15th to 22nd)	Arterial (FDOT Facility)	8	54,000	45	32	45	1.25%
109th Street (15th to 22nd)	Collector	2	2,080	30	21	25	0.17%
Bougainvillea Avenue (Nebraska to McKinley)	Collector	2	6,530	30	26	32	0.76%

Source: Hillsborough MPO, City of Tampa and FDOT. Data representative of 2015 through 2018. Speed data from wejo, representing typical travel behavior in October 2019, as summarized by Fehr & Peers.

Based on the existing traffic volumes and vehicle speeds, the [FHWA Bikeway Selection Guide](#) would not recommend shared lane designations on any of the major collector streets connecting to Copeland Park. The traffic volumes on E 109th Street would be compatible with a shared lane condition if the prevailing travel speed for people driving was less than 25 miles per hour. On N 15th Street, designated bike lanes would be warranted based on the prevailing

traffic volumes. On 22nd Street, a separated bike lane or shared use path would be appropriate given the volume and speed of people driving.

As mentioned previously, a separated bike lane or shared use path is a more appropriate bicycle facility for Fowler Avenue given the speed and volume of people driving vehicles.



## V. Collision Assessment

A collision assessment was conducted for the roadways within a mile radius of the park in the past five years, with a summary of all collisions show on **Figure 6**. A summary of all collisions is shown in **Table 3**, collisions that resulted in a severe injury in **Table 4**, and collisions that resulted in a fatality are shown in **Table 5**. A collision summary on the primary roadway connections to the park was provided in the previous section.

Over the 5-year period, including 2020 when collisions nationwide decreased under COVID-19 conditions, a total of 3,014 reported collisions occurred within a mile radius of Copeland Park. Of these, 18

collisions (0.6 percent of total collisions) resulted in a fatality, and an additional 46 collisions (1.5 percent of collisions) resulted in a severe injury. Between 2016 and 2018, the number of collisions in the area increased by over 37 percent per year, with a slight decline in 2019. It is unclear if the 2019 showed the start of a downward trend with the City of Tampa, the Hillsborough TPO, and Florida Department of Transportation placing a focus on transportation safety. Some access management improvements were also implemented on E Fowler Avenue during the collision analysis period. While there has been a downward trend in all collisions, the number collisions resulting in a severe or fatal injury increased year over year.

**Table 3: Collision Summary**

Year	All Collisions		Motorcycle		Bicyclist		Pedestrian	
	Collisions	% Change	Collisions	% Change	Collisions	% Change	Collisions	% Change
2016	419	-	6	-	8	-	18	-
2017	555	32%	8	33%	21	163%	22	22%
2018	788	42%	9	13%	22	5%	21	-5%
2019	742	-6%	8	-11%	22	0%	21	0%
2020	510	-31%	9	13%	13	-41%	16	-24%
<b>Total</b>	<b>3,014</b>	<b>-</b>	<b>40</b>	<b>-</b>	<b>86</b>	<b>-</b>	<b>98</b>	<b>-</b>

Source: CDMS, 2021



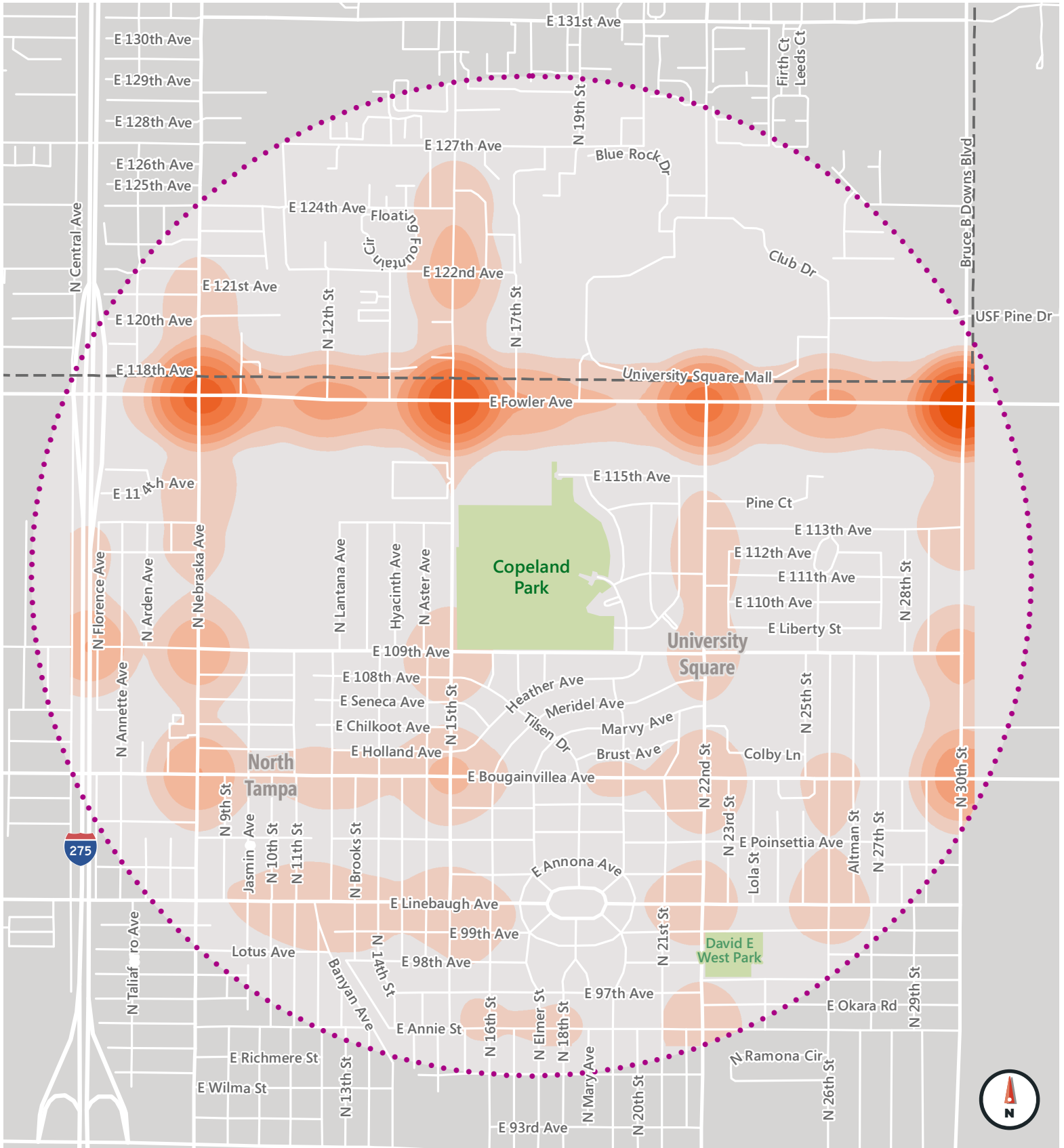
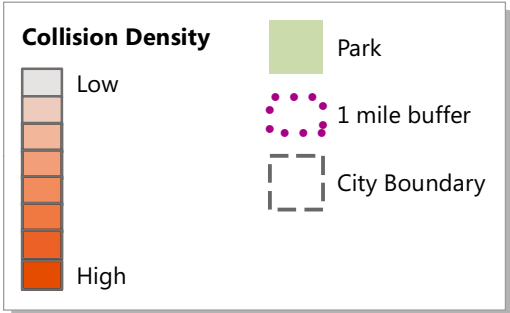


Figure 6  
**Copeland Park Collisions**





**Table 4: Severe Injury Collision Summary**

Year	All Travel Modes		Motorcycle		Bicyclist		Pedestrian	
	Collisions	% Change	Collisions	% Change	Collisions	% Change	Collisions	% Change
2016	5	-	1	-	0	-	0	-
2017	7	40%	1	0%	1	-	2	-
2018	14	100%	1	0%	0	-100%	7	250%
2019	12	-14%	2	100%	1	-	4	-43%
2020	8	-33%	2	0%	1	-	0	-100%
<b>Total</b>	<b>46</b>	<b>-</b>	<b>7</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>13</b>	<b>-</b>

Source: CDMS, 2021

**Table 5: Fatal Collision Summary**

Year	All Travel Modes		Motorcycle		Bicyclist		Pedestrian	
	Collisions	% Change	Collisions	% Change	Collisions	% Change	Collisions	% Change
2016	3	-	0	-	1	-	2	-
2017	3	0%	1	-	0	-100%	2	0%
2018	3	0%	0	-100%	1	-	2	0%
2019	5	67%	0	0%	0	-100%	4	100%
2020	4	-20%	0	0%	0	0%	3	-25%
<b>Total</b>	<b>18</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>13</b>	<b>-</b>

Source: CDMS, 2021



While people walking, riding a bike or driving a motorcycle were involved in about 8 percent of collisions in study area, they represent 48 percent of people seriously injured on the roadway, and 89 percent of fatalities on the roadway system within a one-mile radius of the park. Therefore, a focus on safety countermeasures in the area that improve safety outcomes for people walking, riding a bike or driving a motorcycle will be a critical component of improving accessibility to the park for all travel modes.

Within the one-mile radius of the park, there were three fatal collisions on 15th Street. All three crashes occurred around the intersection of 122nd Avenue and involved a pedestrian being struck by a vehicle at night. There are transit stops on either side of the intersection. In 2020

the City installed crosswalks and pedestrian crossing signs about 80 feet and 240 feet south of the intersection. They also converted some of the streetlights on the roadway from HPS to LED, which provides better illumination.

The time-of-day collisions occur was also reviewed, as summarized in **Table 6**. Vehicle only collisions tend to be more prevalent during the mid-day and evening peak periods, with those nine hours (38 percent of the day) accounting for approximately 62 percent of all vehicle only collisions, while collisions that involve someone riding a motorcycle or a bicycle are more likely to occur during the mid-day. Collisions that result in a serious injury or involve a pedestrian are more likely to occur during overnight hours.

**Table 6: Collisions by Time of Day**

Time of Day	Total Collisions		KSI Collisions		Fatal Collisions	
	Collisions	%	Collisions	%	Collisions	%
Overnight (7PM-6AM)	669	24%	28	44%	23	27%
Morning Peak (6AM-10AM)	393	14%	11	17%	8	9%
Midday (10AM-3PM)	853	31%	15	23%	34	40%
Evening Peak (3PM-7PM)	878	31%	10	16%	21	24%
<b>Total</b>	<b>2,793</b>	<b>100%</b>	<b>64</b>	<b>100%</b>	<b>86</b>	<b>100%</b>

Source: CDMS, 2021



The types of crashes that are occurring on the roadway system were reviewed. Different roadway treatments can address different crash patterns. The data is summarized in **Table 7**, which shows that rear-end collisions are the most frequent in the area and concentrated on E Fowler Avenue. Although pedestrian involved collisions are only 2 percent of overall collisions, they represent 38 percent of all collisions that result in a severe injury or fatality. As potential safety countermeasures are identified, crash patterns will be reviewed at specific locations where countermeasures are proposed.

Based on the collision reports, the top 3 contributing actions to a collision in the study area are:

- Failed to Yield Right-of-Way (21 percent)
- Followed too Closely (19 percent)
- Operated motor vehicle in Careless or Negligent Manner (14 percent)

As the focus of countermeasures will be on those that address potential conflicts with people driving and vulnerable roadway users (people walking, people bicycling and people riding a motorcycle), the specific locations of collisions that resulted in a severe injury or fatality for a vulnerable roadway user were also reviewed, with most occurring on E. Fowler Avenue, N. Nebraska Avenue, and 30<sup>th</sup> Street, just north and south of E. Fowler Avenue.

On N 15<sup>th</sup> Street, numerous vulnerable roadway collisions were reported to the north of E Fowler Avenue. As that segment of N 15<sup>th</sup> Street is the subject of a separate Complete Streets Study, countermeasures developed as a part of that separate process will be considered for continuation along other portions of the corridor. Two crashes on N 15<sup>th</sup> Street south and one crash on E Bougainvillea Avenue involved vulnerable roadway users. In two instances, roadway users

failed to yield the right-of-way, and in the third, a vehicle ran off the road, striking pedestrians standing outside the travel way.

**Table 7: Crash Type Summary**

Crash Type	Crash Type - All Collisions		Crash Type - KSI Collisions	
	Collisions	%	Collisions	%
Angle	687	23%	6	9%
Sideswipe	386	13%	0	0%
Pedestrian	71	2%	<b>24</b>	<b>38%</b>
Rear End	<b>1,248</b>	<b>41%</b>	6	9%
Hit Non-Fixed Object	26	1%	0	0%
U-Turn	44	1%	1	2%
Single Vehicle	24	1%	5	8%
Left Turn	177	6%	11	17%
Head On	50	2%	3	5%
Hit Fixed Object	163	5%	3	5%
Bike	57	2%	3	5%
Run Off Road	2	0%	0	0%
Right Turn	22	1%	1	2%
Unknown	57	2%	1	2%
<b>Total</b>	<b>3,014</b>	<b>100%</b>	<b>64</b>	<b>100%</b>

Source: CDMS, 2021



The age (Table 8) and sex (Table 9) of people involved in collisions in the area was also reviewed and compared to the area and City demographics to see if people in a specific age group or sex are disproportionately affected by collisions. Overall, people aged 25-44 are overrepresented as both people driving and non-motorists in collision. People aged 60 to 75 are also over-represented as non-motorists. While

a collision is less likely to involve people over 75 and under 18 as both a driver (for the over 75 years of age) and a non-motorist, this may be due to a lack of continuous walking and bicycling facilities that suppress demand, rather than a lack of desire to walk or bicycle. Males are significantly more likely to be involved in a collision as both a driver and a non-motorist than females.

**Table 8: Age of People Involved in Collisions**

Age	Drivers		Non-Motorists		Total		Copeland Park Area		Tampa, Florida	
	#	%	#	%	#	%	#	%	#	%
<15	6	0%	16	9%	22	0%	11,194	19%	69,552	18%
15-24	1,176	23%	32	18%	1,208	23%	13,805	24%	54,867	14%
25-44	<b>2,297</b>	<b>45%</b>	<b>71</b>	<b>40%</b>	<b>2,368</b>	<b>44%</b>	<b>14,993</b>	<b>26%</b>	<b>118,153</b>	<b>30%</b>
45-59	1,026	20%	28	16%	1,054	20%	9,819	17%	76,423	20%
60-75	536	10%	<b>24</b>	<b>14%</b>	560	11%	5,817	10%	49,480	13%
75+	107	2%	5	3%	112	2%	2,082	4%	19,441	5%
Total	5,148	100%	176	100%	5,324	100%	57,710	100%	387,916	100%

Source: CDMS, 2021

**Table 9: Sex of People Involved in Collisions**

Category	Male	Female
Drivers	54%	46%
Non-Motorist	77%	23%
Copeland Park Area	48%	52%
Tampa	49%	52%

Source: CDMS, 2021



## VI. Key Findings

Based on the review of the existing conditions assessment for Copeland Park, several transportation themes for consideration in the application of safety countermeasures with a focus on speed management were identified:

- Most park users originate within one mile of the park, such that countermeasures should focus on a one-mile radius
- Inconsistent and deficient sidewalk system may deter some people from walking to the park
- No bicycle facilities connect from the neighborhoods to the park, and sidewalks are not of sufficient width to accommodate people walking and bicycling
- Prevailing travel speeds and roadway volumes suggest that shared lane markings for people bicycling are not appropriate in this context
- Collision profiles indicate that people walking, bicycling and motorcycling are more likely to be killed or severely injured on roadway surrounding the park than people driving, and safety counter measures should focus on these modes
- Men and people aged 25-44 are disproportionately affected by collisions, with non-motorists aged 60-75 also disproportionately affected by collisions

During the public engagement process, feedback related to the following should be sought:

- Potential drainage issues that affect travel during and after periods of rain
- Potential lighting issues that affect travel
- What do you think are the transportation challenges in your neighborhood, specially related to accessing the park and other public facilities in the area?
- Where do you feel unsafe walking or bicycling and why?
- Where do you think street crossings should be added?
- What transportation improvements would you like to see in your neighborhood and connecting to Copeland Park?
- Would you or your family walk, bike and take transit more if facilities were improved?