

FIRST STREET BICYCLE AND PEDESTRIAN SAFETY STUDY

Jacksonville Beach, FL

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First Street Bicycle & Pedestrian Safety Study

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Supplement

Downtown Streetscape Assessment Report



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Acronyms

AADT	Annual Average Daily Traffic
ECG	East Coast Greenway
CA-1	Character Area 1
CA-2	Character Area 2
CA-3	Character Area 3
CA-4	Character Area 4
CBD	Central Business District
CRA	Community Redevelopment Area
FDOT	Florida Department of Transportation
FGDL	Florida Geographic Data Library
FHWA	Federal Highway Administration
ITE	Institute of Transportation Engineers
NACTO	National Association of City Transportation Officials
NRHP	National Register of Historic Places
S4	Signal 4
TPO	Transportation Planning Organization
VRU	Vulnerable Road Users

1.0 Introduction



1.0 Introduction

First Street is a signature coastal corridor in the City of Jacksonville Beach that supports a wide range of daily and seasonal activities, supporting local residents, commercial destinations, popular beachfront attractions, special events, and a vibrant nightlife. Due to this range of activities and destinations, the corridor experiences frequent daily use across a variety of modes, including people walking, biking, and driving.

Over time, the City has implemented streetscape improvements intended to create a flexible, festival-oriented environment along First Street, including decorative pavement treatments and a shared-space character in certain segments. While these features support special events and placemaking goals, they can reduce the clarity of how the corridor operates during typical, non-event conditions. In particular, the blending of modes and limited use of conventional traffic control elements can make it less intuitive for users to understand where different modes are expected to travel.

Therefore, the purpose of this study is to evaluate how the existing corridor design influences user behavior, safety, and overall legibility, and to identify opportunities to enhance clarity and comfort for all users without compromising the corridor's character or functionality.

The resulting recommendations were designed to reinforce modal separation and safety, enhance visual cues, and supporting more predictable multimodal operations along First Street.

Study Limits

The study limits are First Street from Ponte Vedra Boulevard to south to Seagate Avenue/20th Avenue North (approximately 3.4 miles long) located within the city limits of Jacksonville Beach.

Figure 1-1 Study Limits

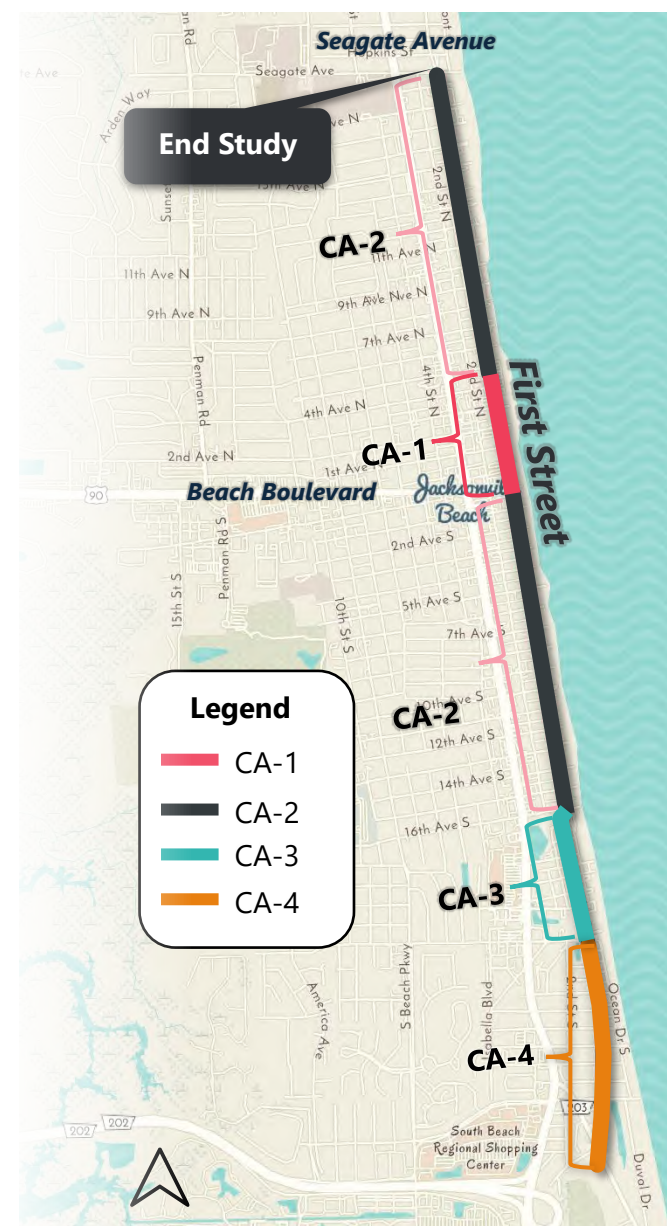


Character Areas

The corridor was divided into specific “character areas” as land use and roadway design changes throughout the project limits. These character areas are referenced throughout the document and were used to organize the corridor evaluation and improvement concepts. The four character areas include:

- ❖ **Character Area 1 (CA-1): Downtown/Commercial Core** (*Beach Boulevard to 5th Avenue N*): The downtown core of Jacksonville Beach. Defined by commercial land uses, wide sidewalks, and high levels of bicycle and pedestrian activity. The corridor accommodates on-street parking and a mix of travel modes resulting in complex interactions between people driving, walking, and biking. Dedicated bicycle facilities are limited, and modes are often not clearly delineated, contributing to a dynamic and highly active streetscape.
- ❖ **Character Area 2 (CA-2): Residential-Transitional Multimodal** (*16th Avenue S to Beach Boulevard; 5th Avenue N to Seagate Avenue*): Represented both north and south of CA-1, this character area serves as a transition between the downtown core and adjacent residential areas. The roadway features narrow travel lanes, bike lanes, and sidewalks on both sides of the street, supporting multimodal travel.
- ❖ **Character Area 3 (CA-3): Residential-Enhanced Multimodal** (*25th Avenue S to 16th Avenue S*): Predominantly residential with a mix of medium- and lower-density development. This character area includes bike lanes on both sides of the street but generally lacks sidewalks.
- ❖ **Character Area 4 (CA-4): Residential-Low Multimodal** (*Ponte Vedra Boulevard to 25th Avenue S*): This character area is characterized by low-density single-family residential land use and a more suburban roadway context. Sidewalks are generally absent, and a painted shoulder functions as a bike lane in some segments. On-street parking is present throughout much of the area, and multimodal accommodations are limited compared to other portions of the corridor.

Figure 1-2 Character Areas



Study Process

The study was conducted through a multi-disciplinary approach using landscape architects, transportation planners, and traffic engineers. The process consisted of the following elements:



Existing Conditions Analysis: A comprehensive review of existing conditions including roadway geometry, high-level traffic operations, bicycle and pedestrian facilities, planning and policy review, and historical crash data.



Near-Miss Analysis: A supplemental safety analysis was conducted by Street Simplified to identify near-miss conflicts between roadway users. Additional detail on this analysis may be found in **Section 3.1**.



Downtown Streetscape Assessment: A parallel analysis was completed by the landscape architecture team, focusing specifically on streetscape elements, buffers, public realm conditions, and opportunities to enhance safety and comfort through specific design strategies.



Field Reviews: Multiple field visits were conducted to observe corridor operations, validate mapped conditions, document user behavior, and identify issues not readily apparent through data analysis.



Development of Recommendations: Findings from the near-miss evaluation, field observations, field reviews, safety and operational analysis, and downtown streetscape assessment were synthesized to develop a set of improvement concepts for the First Street corridor. These concepts were tailored to each character area to reflect varying corridor concepts to provide practical, implementable strategies.

Existing Conditions
Analysis



Near-Miss Analysis



Downtown Streetscape
Assessment



Field Reviews



Improvement
Concepts

Study Guidance

This study was guided by the Safe Roads Element of Florida Highway Administration's (FHWA) *Safe System Approach*, which has been unanimously recommended by leading transportation agencies including Florida Department of Transportation (FDOT), Institute of Transportation Engineers (ITE), and National Association of City Transportation Officials (NACTO). The *Safe System Approach* works by reinforcing multiple layers of protection to both prevent crashes from occurring and minimizing the injuries caused by crashes when they occur.

Consistent with this approach, the *First Street Safety Study* emphasizes improved clarity and organization of the roadway, predictable interactions between users, and context-sensitive design solutions that respond to surrounding land use and activity levels. Recommendations focus on reducing modal conflicts, improving comfort and legibility for people walking and bicycling, and enhancing safety through layered design strategies rather than reliance on behavioral compliance alone.



Beach access from First Street. Source: Project Team.



First Street corridor. Source: Project Team.

2.0 Existing Conditions



2.0 Existing Conditions

The existing conditions analysis included a review of the current infrastructure, land use, and policies for the corridor. The purpose of this analysis was to evaluate the unique environment of the project corridor with a special focus on bicycle and pedestrian safety and legibility, especially in the downtown character area (CA-1).

The analysis consisted of the following elements:

- ❖ **General Roadway Characteristics**
- ❖ **General Environmental Characteristics**
- ❖ **Planning and Policy Review**
- ❖ **Historical Crash Analysis**

This analysis acts as the foundation for potential enhancements for bicycle and pedestrian safety, as well as overall function of this unique roadway.

2.1 Study Corridor Description

First Street is north-south roadway located in in the City of Jacksonville Beach in Duval County, Florida. The study limits are from Ponte Vedra Boulevard to Seagate Avenue. First Street is functionally classified as a **Major Collector** by FDOT and is approximately **3.4 miles long**.



First Street corridor. Source: Project Team.

2.2 General Roadway Characteristics

The following summarizes the existing roadway characteristics for the First Street corridor:

- ❖ **Functional Classification:** Major Collector
- ❖ **Census Urbanized Area:** Yes
- ❖ **Posted Speed:** 15 mph to 25 mph
- ❖ **Annual Average Daily Traffic (AADT):** 1,600
- ❖ **Drainage:** Primarily curb and gutter; some swales
- ❖ **Pedestrian Facilities:** Sidewalks on both sides of the corridor for majority of the study limits (CA 1-3)
- ❖ **Bicycle Facilities:** Variety of facilities along the corridor ranging from bike lanes on one or both sides, and some sharrows
- ❖ **Beach Access:** 48 beach access points directly off First Street
- ❖ **Lighting:** Present along entire corridor
- ❖ **Parks:** 4 parks are present along the corridor (Seawalk Pavilion, UNF Seaside Sculpture Park, Oceanfront Park, Huguenot Park)
- ❖ **Signalized Intersections:** None
- ❖ **School Zones:** None
- ❖ **Transit/Bus Stops:** None
- ❖ **Fire Stations:** None



People biking on First Street. Source: Project Team.

Posted Speed

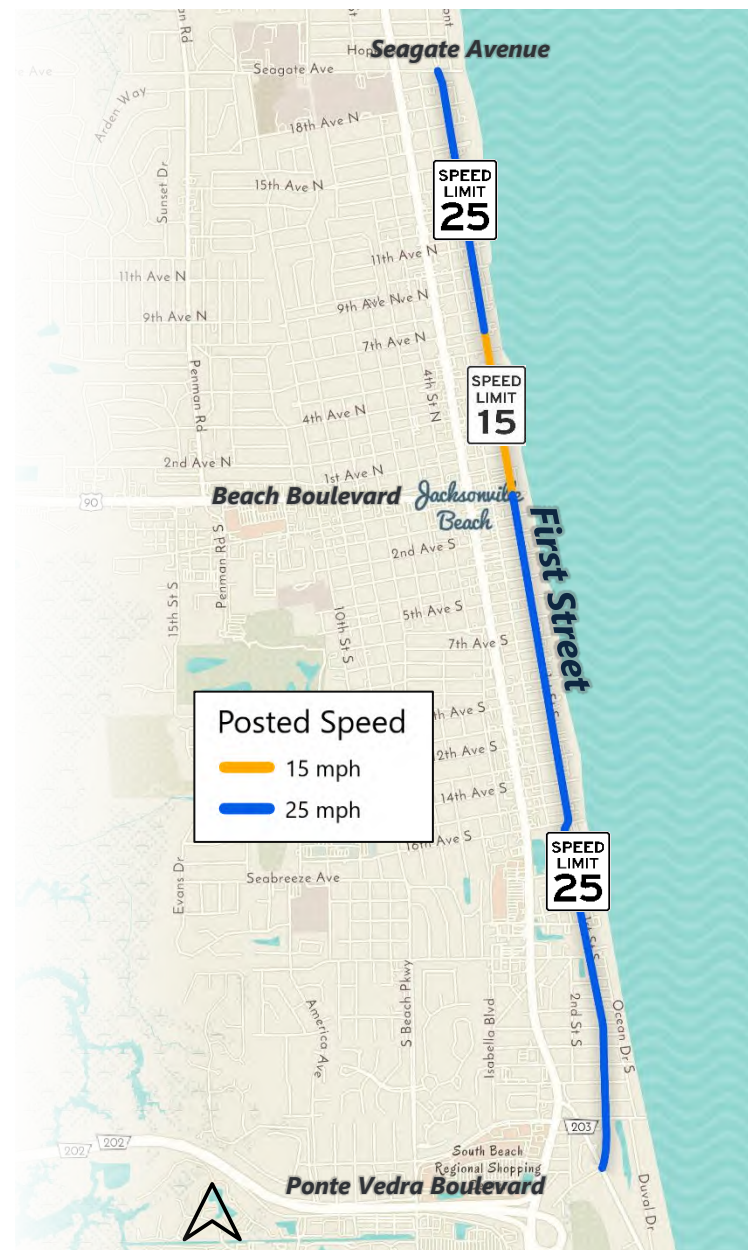
The posted speed of the First Street corridor ranges from 15 mph to 25 mph (see **Figure 2-5**):

- ❖ **25 mph in Character Areas 2, 3, and 4**
 - ◆ Ponte Vedra Boulevard to Beach Boulevard
 - ◆ 7th Avenue N to Seagate Avenue
- ❖ **15 mph in Character Area 1 and two blocks of Character Area 2**
 - ◆ Beach Boulevard to 7th Avenue N



15 mph speed limit sign on First Street. Source: Project Team.

Figure 2-1 Posted Speed



Pedestrian Facilities

Sidewalks are present on both sides of First Street for roughly 2.4 miles from Seagate Avenue to 16th Avenue South. There are no sidewalks south of 16th Avenue S. **Figure 2-6** displays the map of existing sidewalk locations.



Pedestrian facilities on First Street. Source: Project Team.

Figure 2-2 Pedestrian Facilities



Beach Accesses & Crosswalks

Beach Accesses

There are **48 beach access points** within 500 feet of First Street (marked as a red dot in **Figure 2-7**). Many of these beach access locations (26) also have public parking lots located to the east of the roadway.

Crosswalks

There are currently **20 marked crosswalks** along First Street (marked as a green dot in **Figure 2-7**). Not every beach access has an associated crosswalk for pedestrians to safely cross First Street to access the beach.

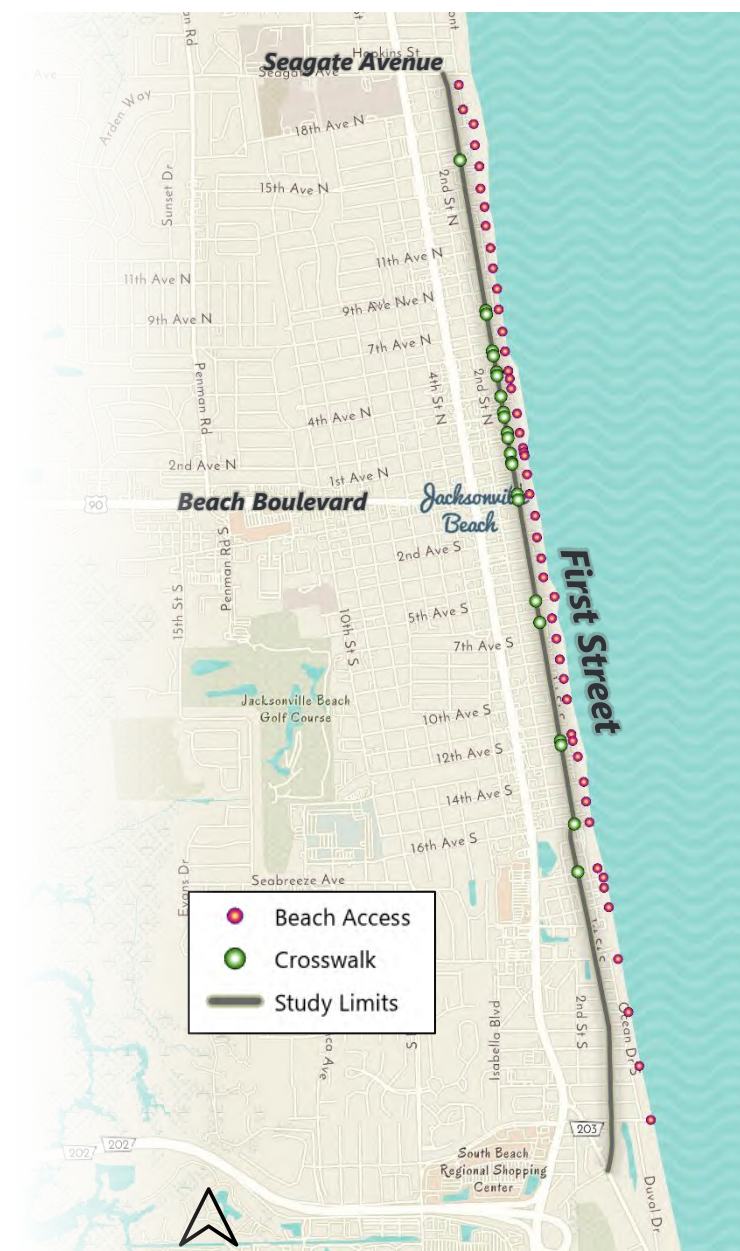


Beach access with parking lot. Source: Project Team.



Crosswalk on First Street. Source: Project Team.

Figure 2-3 Beach Accesses & Crosswalks



Bicycle Facilities

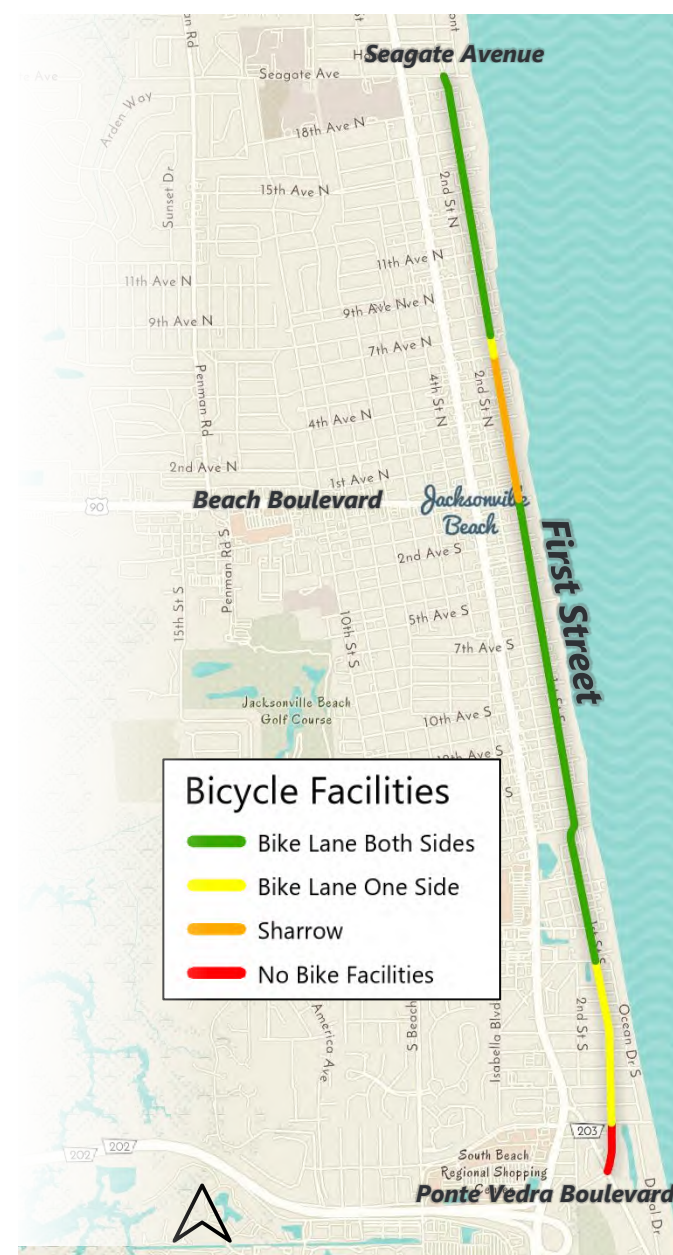
Bicycle facilities are present for most of the corridor with only one area (0.2 miles) without any bike facilities at the southern end of the corridor (see **Figure 2-8**). Bike lanes are present on both sides of the roadway for the majority of the corridor, primarily in Character Areas 2 and 3. (2.3 miles). Bike lanes on one side of the roadway are present for 0.6 miles, and sharrows are present for 0.5 miles, exclusively in the downtown area (CA-1). The bike lanes are typically five feet in width.

Note: The bicycle lanes from 16th Avenue South to 37th Avenue South function as a paved shoulder and have severe damage in some locations.



Bicycle on First Street. Source: Project Team.

Figure 2-4 Bicycle Facilities



2.3 Planning and Policy Review

This section outlines the planning and policy framework that guides decision-making along the corridor, including land use, adopted plans, and environmental considerations. The following pages provide additional detail for each of these elements. The general planning characteristics and policies are summarized as follows:

- ❖ **Municipality:** City of Jacksonville Beach.
- ❖ **Existing & Future Land Use:** A mix of residential of varying densities and commercial uses.
- ❖ **Special Planning Districts:** Portions of the study area are with the City of Jacksonville Beach Downtown Community Redevelopment Area (CRA) (see **Figure 2-9**).
- ❖ **Relevant Plans:** City of Jacksonville Beach Vision & Redevelopment Plans, 2050 Jacksonville Beach Comprehensive Plan, Jacksonville Beach Land Development Code (LDC), Jacksonville Beach Urban Trails Master Plan (2022), Beaches East Coast Greenway Feasibility Study (2022).
- ❖ **Proposed Trail:** East Coast Greenway through the study limits.
- ❖ **Flood Zone(s):** Flood Zone AE through much of the corridor, particularly towards the southern limits.
- ❖ **Wetlands:** Limited to no wetlands.
- ❖ **Historic Places & Cemeteries:** Two sites registered on the National Register of Historic Places (NRHP).

Figure 2-5 Downtown Redevelopment District



Trail Planning

The study limits are included as a proposed trail, which is intended to be designated East Coast Greenway. As stated on the East Coast Greenway (ECG) Alliance website (www.greenway.org), the ECG is a multi-use trail system connecting 15 states and 450 cities and towns for 3,000 miles from Maine to Florida. An interactive trail map is available on the ECG website. The following planning documents also include a multi-use trail/East Coast Greenway route along First Street:

- ❖ *Jacksonville Beach Urban Trails Master Plan (2022)*
- ❖ *Beaches East Coast Greenway Feasibility Study (2022)*
- ❖ *City of Jacksonville Beach Comprehensive Plan (2020), Map TE-11*
- ❖ *Duval County Beaches Bicycle and Pedestrian Focus Area Study (2016)*
- ❖ *Northeast Florida Regional Trails Master Plan (2019)*



First Street Trail Typology Concept (B-2). Source: Jacksonville Beach Urban Trails Master Plan (2022).



Recommended ECG route along First Street. Source: Beaches East Coast Greenway Feasibility Study (2022), Figure 5-2.

Existing Land Use

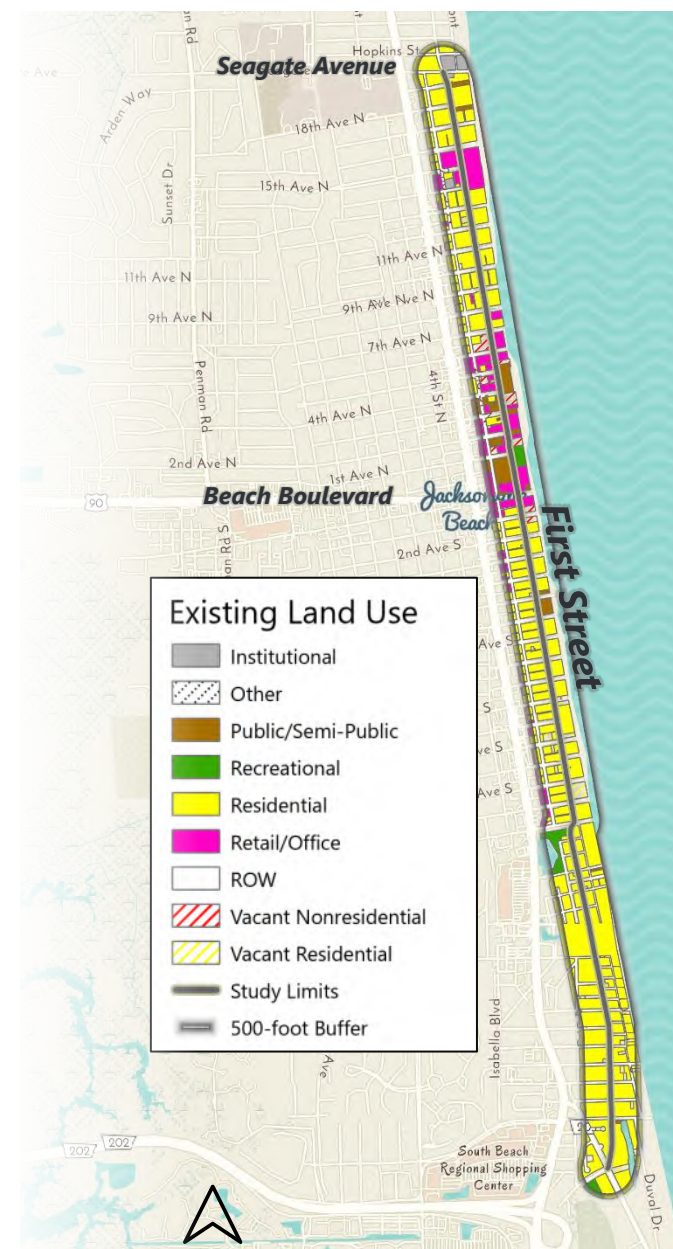
The generalized existing land use was established using the “Generalized Land Use derived from 2019 Florida Parcels” dataset from the GeoPlan Center. The data was created for FDOT and generalizes 99 available land uses into 15 land use classifications.

The existing land use along the corridor is primarily a mix of multi-family residential, single-family residential, and commercial (see **Figure 2-10**). There are a few vacant parcels and public lands throughout the corridor.



Existing multi-family residential along First Street. Source: Project Team.

Figure 2-6 Existing Land Use



Future Land Use

The future land use data for Jacksonville Beach was derived from the Florida Geographic Data Library (FGDL) generalized future land use for the State of Florida (April 2022) and cross referenced with the future land use maps from the Jacksonville Beach 2050 Comprehensive Plan.

Most future land use designations are for high density residential (orange) with some low density residential (yellow) and some commercial (red) in the Jacksonville Beach Central Business District (CBD). There is one institutional land use parcel and two recreational land use parcels.



Commercial land uses along First Street. Source: Project Team.

Figure 2-7 Future Land Use



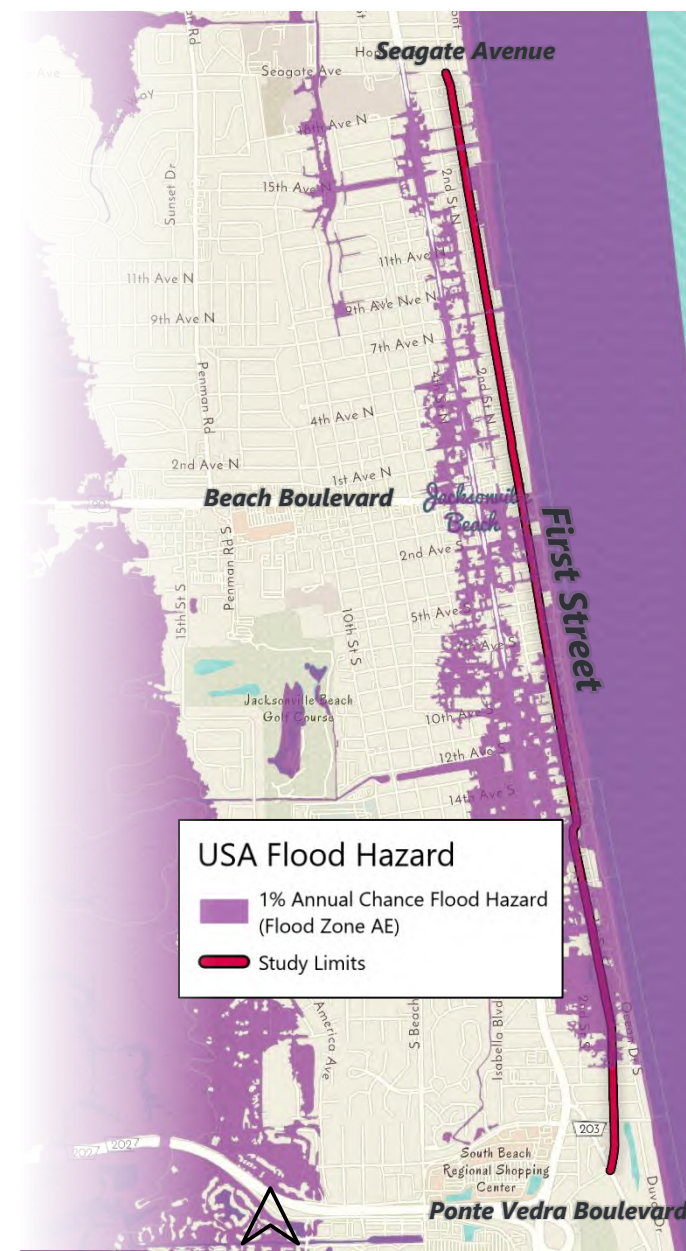
Flood Risk

There is flood risk along the majority of the corridor, with particularly concentrated areas south of Beach Boulevard within Flood Zone AE, which is 1% Annual Chance of Flood Hazard (see **Figure 2-12**).



Standing water along First Street after a storm. Source: Project Team.

Figure 2-8 Flood Risk



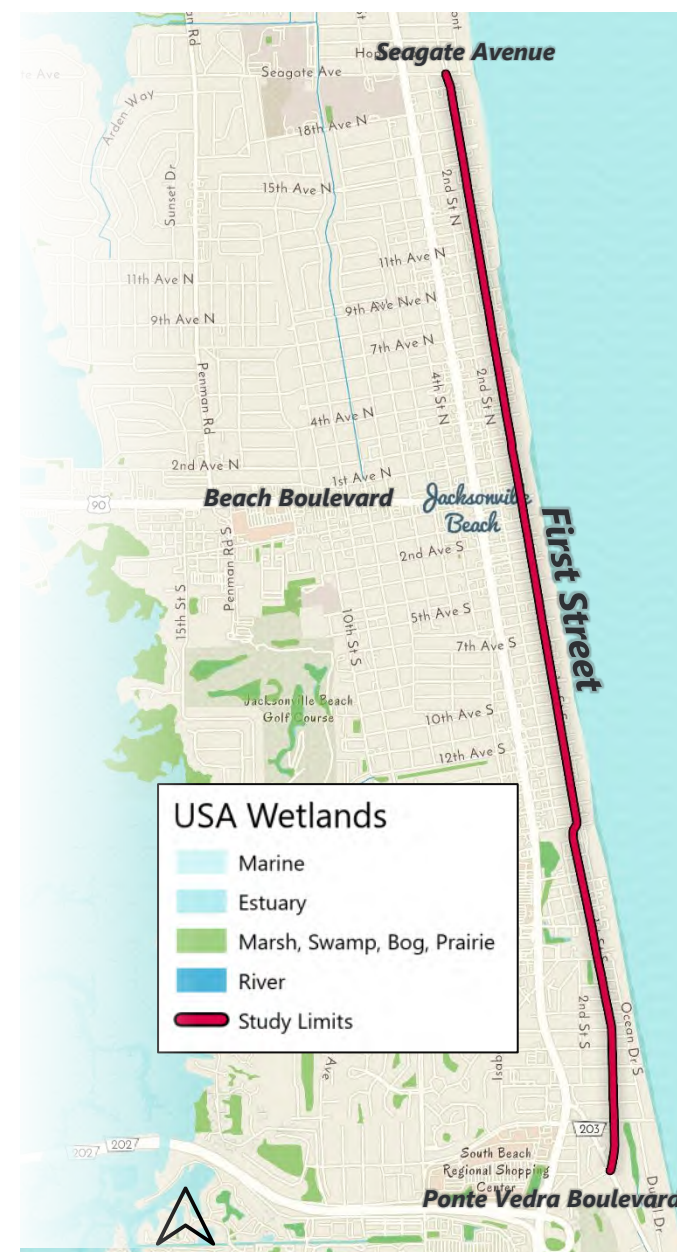
Wetlands

Due to the coastal location of First Street, there are limited to no wetlands along the corridor (see **Figure 2-13**). However, there are Marine; Estuary; Marsh, Swamp, Bog, Prairie; and River wetland systems within the surrounding area.



Coastal photo along First Street. Source: Project Team.

Figure 2-9 Wetlands



Historic Places

There are two sites along the First Street Corridor registered on the National Register of Historic Places (NRHP):

❖ Casa Marina Hotel

- ◆ Address: 12 Sixth Avenue North, Jacksonville Beach Florida
- ◆ Type: Building
- ◆ Status: Listed
- ◆ NRHP Reference Number: 9300893

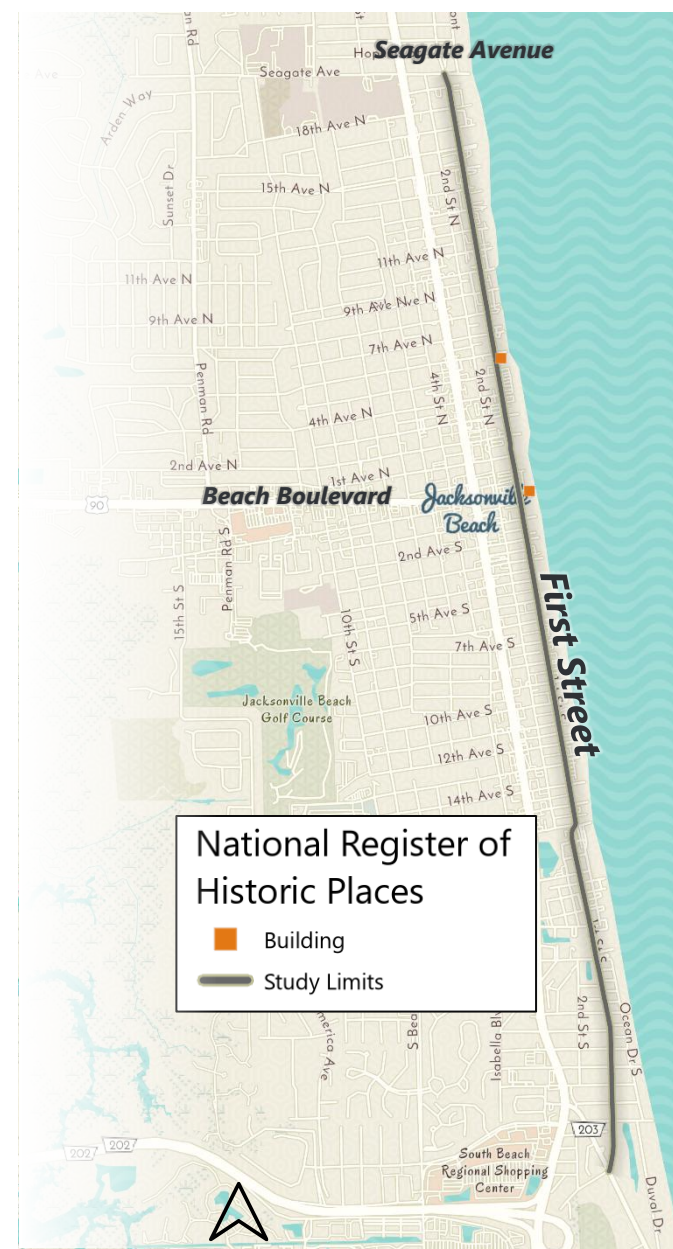
❖ American Red Cross Volunteer Life Saving Corps Station

- ◆ Address: 2 Ocean Front North, Jacksonville Beach Florida
- ◆ Type: Building
- ◆ Status: Listed
- ◆ NRHP Reference Number: 14000187



American Red Cross Volunteer Life Saving Corps Station. Source: Project Team.

Figure 2-10 Historic Places

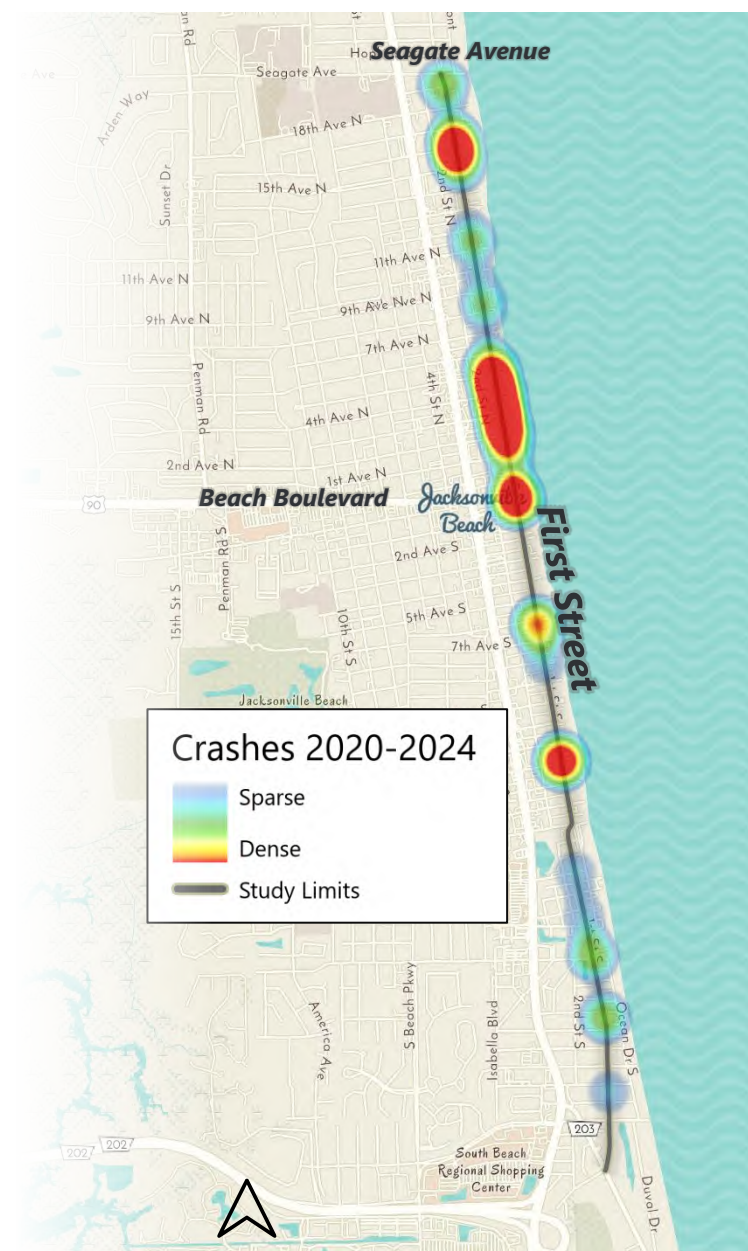


2.4 Historical Crash Analysis

A historical crash analysis was conducted for the First Street corridor using Signal 4 Analytics (S4) data. The previous five years (2020-2024) of complete data was utilized for this analysis. The results are briefly listed below, and further details are provided in this section.

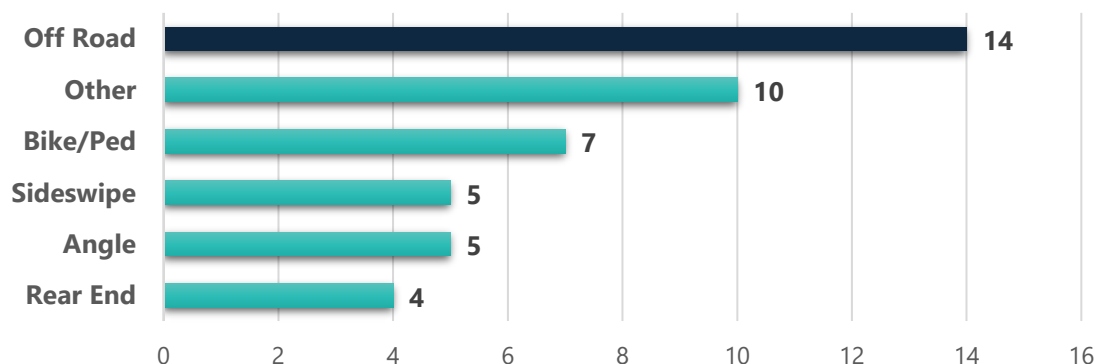
- ❖ **Total Crashes:** 45.
- ❖ **Crash Severity:** No fatalities; 3 serious injuries; 12 injuries.
- ❖ **Crash Type:** Off-Road and Other were the two most common crash types.
- ❖ **Bicycle and Pedestrian Crashes:** 5 Bicycle and 2 Pedestrian crashes.
- ❖ **Intersection Type:** Majority of crashes did *not* occur at an intersection.
- ❖ **Crash Year:** The number of crashes is generally decreasing, ranging from a high of 14 crashes in 2021 to a low of 5 crashes in 2024.
- ❖ **Lighting Conditions:** Crashes were nearly evenly split between Dark-Lighted conditions and Daylight conditions.
- ❖ **Weather and Road Surface Conditions:** Most crashes occurred in Clear weather conditions and dry roadways.
- ❖ **Alcohol Involvement:** Alcohol was a factor in 31% of the crashes.
- ❖ **Speeding:** Speeding was a factor in only *one* crash.
- ❖ **Time of Day:** Highest concentration of crashes occurred between 9 PM and 12 AM.
- ❖ **Day of the Week:** Sunday experienced the highest number of crashes.

Figure 2-11 Crash Heat Map



Crash Type

The most common crash types were Off Road (31%), Other (22%), and Bike/Ped (16%). Other crash types along the corridor include Sideswipe and Angle with 11% of the crashes each, and Rear End comprising 9% of the crashes.



Bicycle and Pedestrian Crashes

Of the 45 total crashes, 7 involved a bicycle or pedestrian (16%). Most of them occurred during the day on dry road surface conditions.

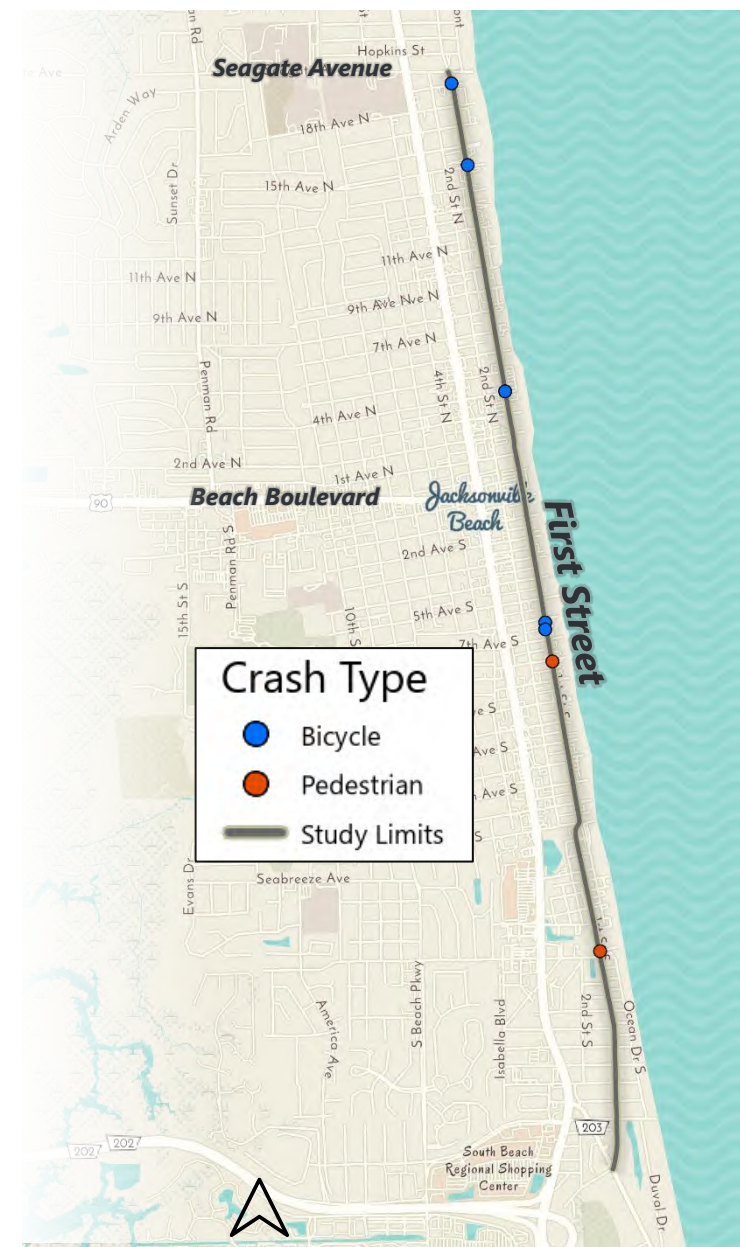
Bicycle Crashes

Five crashes involved people riding a bicycle. Geographically, all bicycle crashes occurred in the middle to northern areas of the study corridor, spanning from 6th Avenue South to Seagate Avenue. All five crashes resulted in injuries.

Pedestrian Crashes

Two crashes involved people walking. One crash occurred at 8th Avenue South and the other occurred at Costa Verde Boulevard. They both occurred in the 1 PM hour. Neither resulted in injuries.

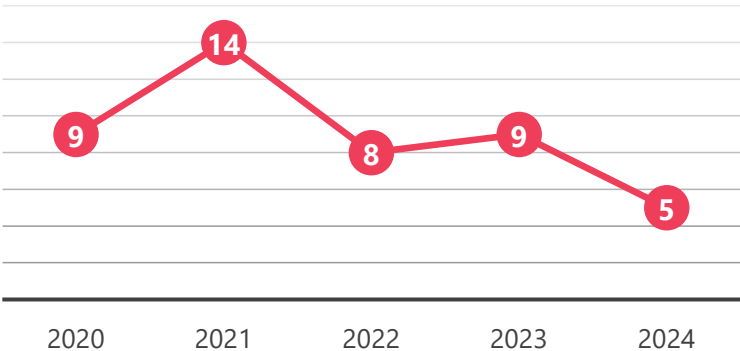
Figure 2-12 Bicycle and Pedestrian Crashes





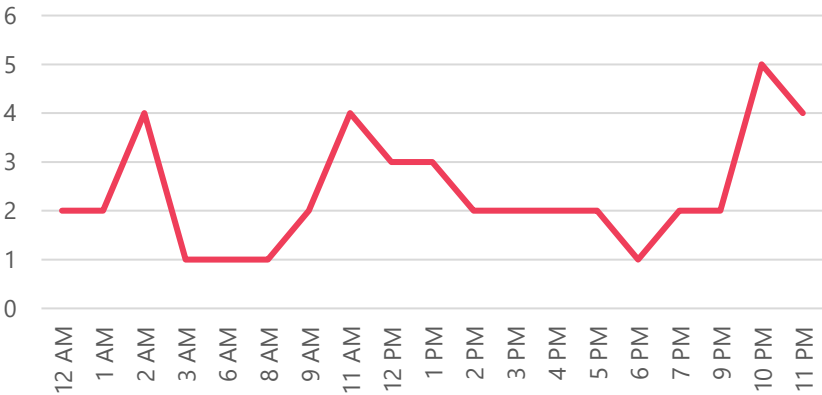
Crash Year

The overall crash trend decreased over the five-year period. Crashes ranged between a low of 5 crashes in 2024 to 14 crashes in 2021. There were either 8 or 9 crashes in 2020, 2022, and 2023.



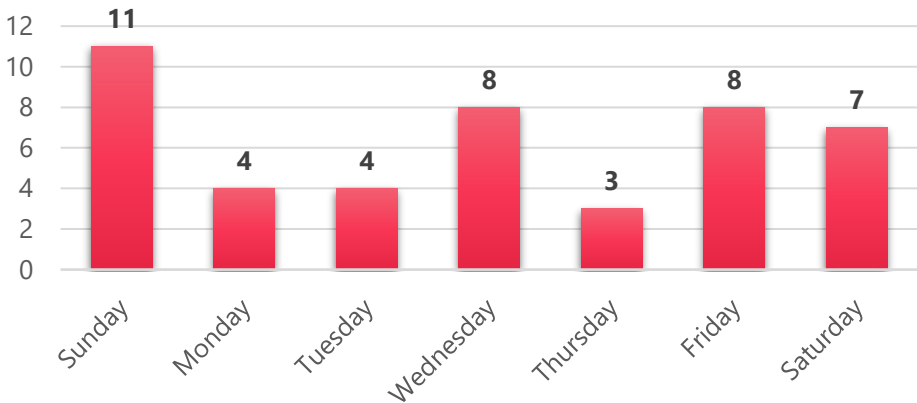
Crash Time of Day

Crash frequency peaks during the late evening period (approximately 8 PM to midnight), with the highest concentration occurring between 9 PM and midnight. Secondary peaks are observed during the early afternoon (12 PM–4 PM) and overnight hours.



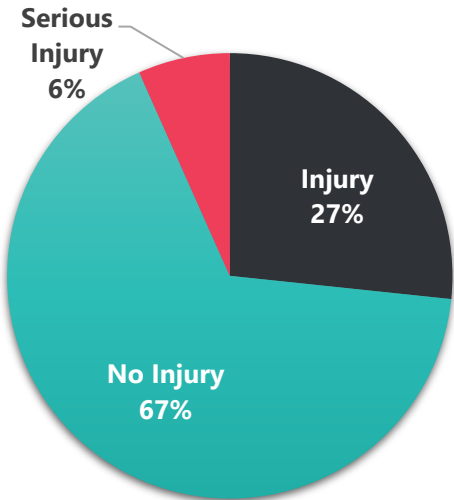
Crash Day of the Week

Crashes occurred most frequently on Sundays, with Sunday comprising 24% of all crashes. Other common days were Wednesday and Friday, with 8 crashes each.



Crash Severity

Most crashes resulted in No Injuries (67%). The remaining crashes either resulted in Injury (27%) or Serious Injury (6%). No crashes resulted in a fatality.





3.0 Corridor Evaluation

3.0 Corridor Evaluation

The corridor evaluation element of this study consisted of three complementary efforts. Two of these evaluations focused specifically on Downtown Jacksonville Beach (Downtown Character Area, CA-1): a Near-Miss Analysis prepared by Street Simplified and a Downtown Streetscape Assessment completed by the project team's internal landscape architecture group. Collectively, these efforts provided a detailed understanding of operational and streetscape conditions within the downtown context.

In addition, a field review was conducted along the full length of the corridor to document existing conditions, identify recurring issues, and understand how conditions and character transition within and outside of the downtown area. Key findings from each of these evaluations are summarized in this section to inform the corridor recommendations, while full documentation and supporting materials are provided in the **Downtown Streetscape Assessment Supplement**.



KEY FINDINGS

- ❖ **Downtown safety issues extend beyond reported crashes.** Near-miss analysis in CA-1 revealed frequent conflicts, particularly involving pedestrians and turning vehicles, that are not captured by traditional crash data alone.
- ❖ **Pedestrian exposure and turning movements drive most conflicts downtown.** Interactions between pedestrians, bicyclists, and turning vehicles were the most common near-miss conditions observed at key downtown intersections.
- ❖ **Street design strongly influences behavior.** Pavement patterns, surface treatments, and curb definition play a major role in how users interpret movement, priority, and space. This sometimes reinforces safe behavior and other times creates uncertainty.
- ❖ **Highly decorative or abstract pavement reduces clarity.** Intersections and streetscapes with unclear alignment, limited contrast, or blurred edges make it harder for users to quickly understand where to drive, park, or cross.
- ❖ **Corridor conditions vary by character area.** The downtown core functions as a shared, negotiated space; transitional segments provide clearer separation between modes; and residential areas reflect infrastructure gaps that push pedestrians and bicyclists into the roadway.
- ❖ **Continuity and consistency matter.** Predictable layouts, continuous facilities, and clear visual cues support safer and more comfortable movement along the corridor.

3.1 Near-Miss Analysis

To supplement traditional crash data and better understand day-to-day safety conditions in the Downtown Character Area (CA-1), a near-miss analysis was conducted by Street Simplified. Unlike conventional crash analyses, which rely on reported collision records, near-miss analysis captures instances where conflicts occurred but did not result in a reported crash. These events provide insight into underlying operational and design issues that may not yet be reflected in crash history, but present ongoing safety concerns.

Analysis Process

Street Simplified utilized video-based observation and data analytics to document conflicts involving vehicles, pedestrians, and bicyclists over multiple days at selected downtown intersections. The analysis focused exclusively on CA-1, where pedestrian activity, multimodal interactions, and constrained right-of-way conditions are most prominent.

Analysis Locations & Data Collection

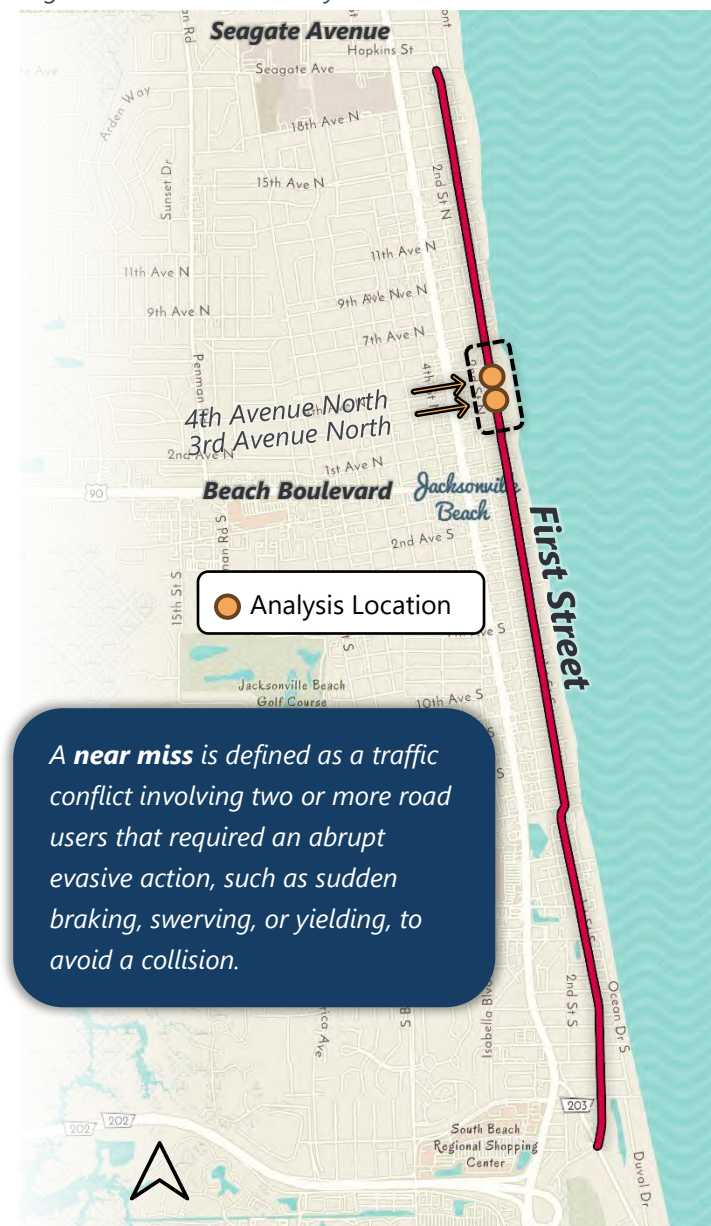
The near-miss analysis was conducted at two downtown intersections along 1st Street North (see **Figure 3-1**):

- ❖ **1st Street North & 4th Avenue North**
- ❖ **1st Street North & 3rd Avenue North**

These intersections were selected due to their central downtown location, higher levels of pedestrian and bicycle activity, and documented crash history. Video data were collected continuously over **seven consecutive days** at each location, capturing weekday and weekend conditions as well as varying traffic and pedestrian volumes.

STREET
simplified

Figure 3-1 Near Miss Analysis Locations



Crash History Analysis

As context for the near-miss findings, Street Simplified reviewed reported crash data from **2016 to 2025**:

- ❖ **1st St N & 4th Ave N**: 13 reported intersection crashes (9 mapped)
- ❖ **1st St N & 3rd Ave N**: 24 reported intersection crashes (20 mapped)

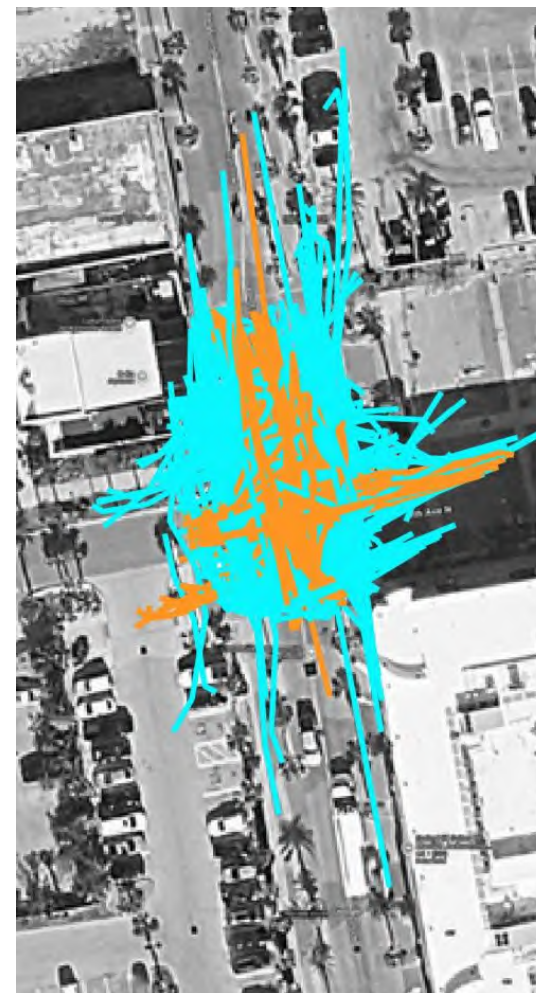
While the reported crash volumes are relatively modest, the **near-miss analysis revealed a substantially higher frequency of conflicts**, particularly involving pedestrians and turning vehicles. This disparity suggests that **risk exposure in downtown CA-1 may be underrepresented by crash data alone**.

Overview of Observed Near-Miss Activity

Near-miss events were categorized by conflict type, with emphasis on interactions involving vulnerable road users (VRUs), including pedestrians and bicyclists. Across both study locations, the most frequent types of conflicts included:

- ❖ Vehicle–pedestrian and vehicle–bicycle conflicts in marked crosswalks
- ❖ Left-turn conflicts between vehicles and through movements
- ❖ Through-through conflicts during peak activity periods
- ❖ Merging conflicts related to turning and driveway movements
- ❖ Speed-related conflicts where higher vehicle speeds reduced reaction time

These patterns were consistent across multiple days of observation and were not isolated to a single time period, indicating recurring operational issues rather than anomalous events.



Vulnerable Road User Conflicts, 4th Avenue. Source: Street Simplified.

Vulnerable Road User (VRU) Conflicts - Crosswalks

A significant share of observed near-misses involved vehicles interacting with **pedestrians or bicyclists within marked crosswalks**. These events typically occurred when **turning vehicles** crossed active pedestrian movements or when **through vehicles approached crosswalks at higher speeds**.

Across both intersections, hundreds of VRU-related conflict events were recorded, including:

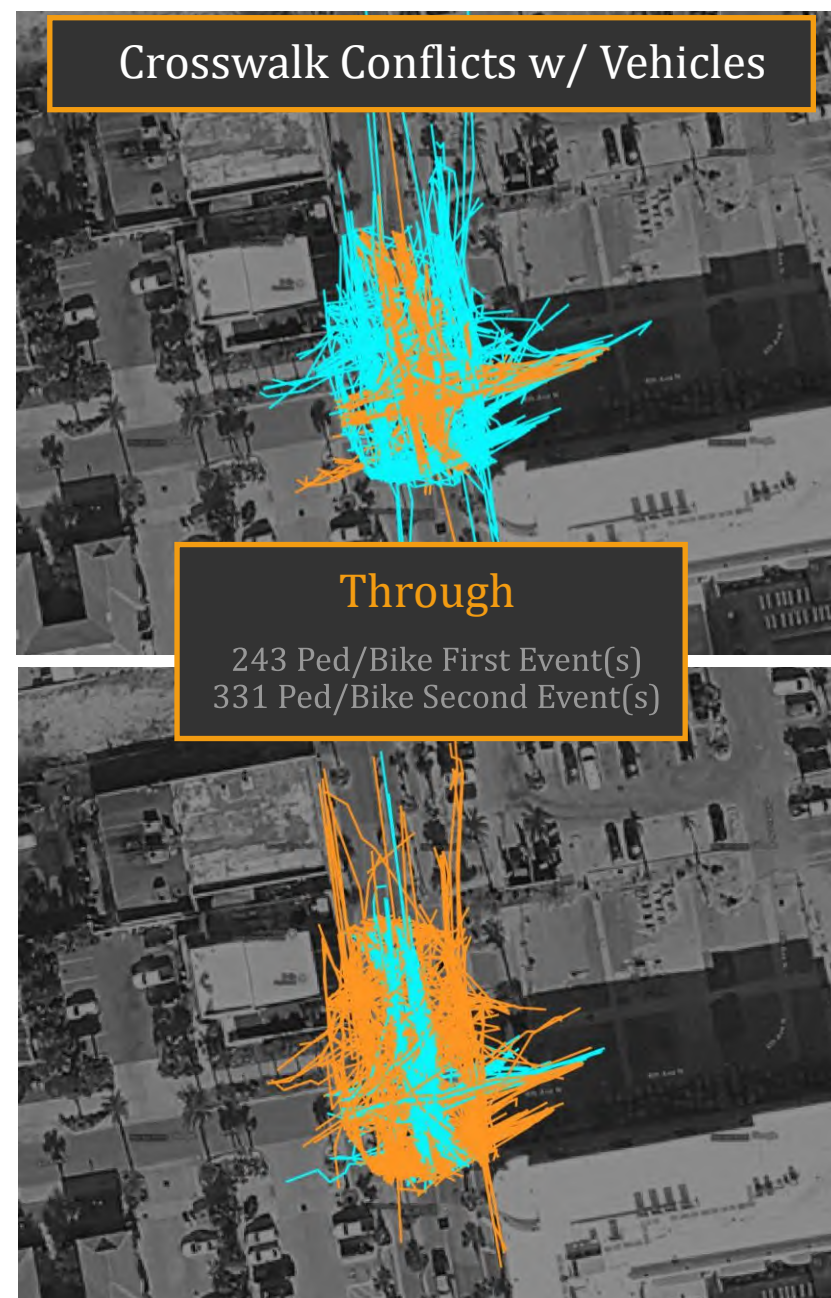
- ❖ Pedestrians entering crosswalks during permissive vehicle movements
- ❖ Vehicles failing to yield while turning left or right
- ❖ Pedestrians and cyclists adjusting speed or path to avoid oncoming vehicles

Turning Movement Conflicts

Turning movements, particularly left turns, were a consistent source of near-miss activity. At both study locations, conflicts were observed between:

- ❖ Left-turning vehicles and opposing through traffic
- ❖ Left-turning vehicles and crossing pedestrians
- ❖ Competing left-turn movements during unsignalized operation

These conflicts frequently involved hesitation, late decision-making, or evasive braking, suggesting limited sight distance, complex priority conditions, or ambiguity in how space is shared within the intersection.



Example conflict diagram of crosswalk conflicts with vehicles at 4th Avenue North. Source: Street Simplified.

Through-Through and Merging Conflicts

In addition to turning-related issues, conflicts between intersecting approaches, as well as merging conflicts associated with right-turn and driveway movements were documented. While fewer in number than VRU conflicts, these events indicate **broader operational friction within the downtown street network**, particularly during higher activity periods.

Speed and Compliance Observations

Speed-related behavior was identified as a contributing factor in a subset of near-miss events. Although posted speeds within downtown CA-1 are low, vehicles exceeding the intended operating speed were observed reducing their ability to yield or stop comfortably at crosswalks.

The analysis also identified patterns of **stop-sign non-compliance**, particularly at approaches with lower perceived cross-traffic volumes. In some cases, the majority of sampled vehicles failed to come to a complete stop, increasing risk for pedestrians entering the crosswalk.



Screen capture of near-miss video of a through-vehicle and pedestrian at 4th Avenue North. Source: Street Simplified.

Location-Specific Findings

While near-miss patterns were broadly similar across both study locations, some location-specific tendencies reflecting differences in traffic volumes, pedestrian activity, and intersection geometry.

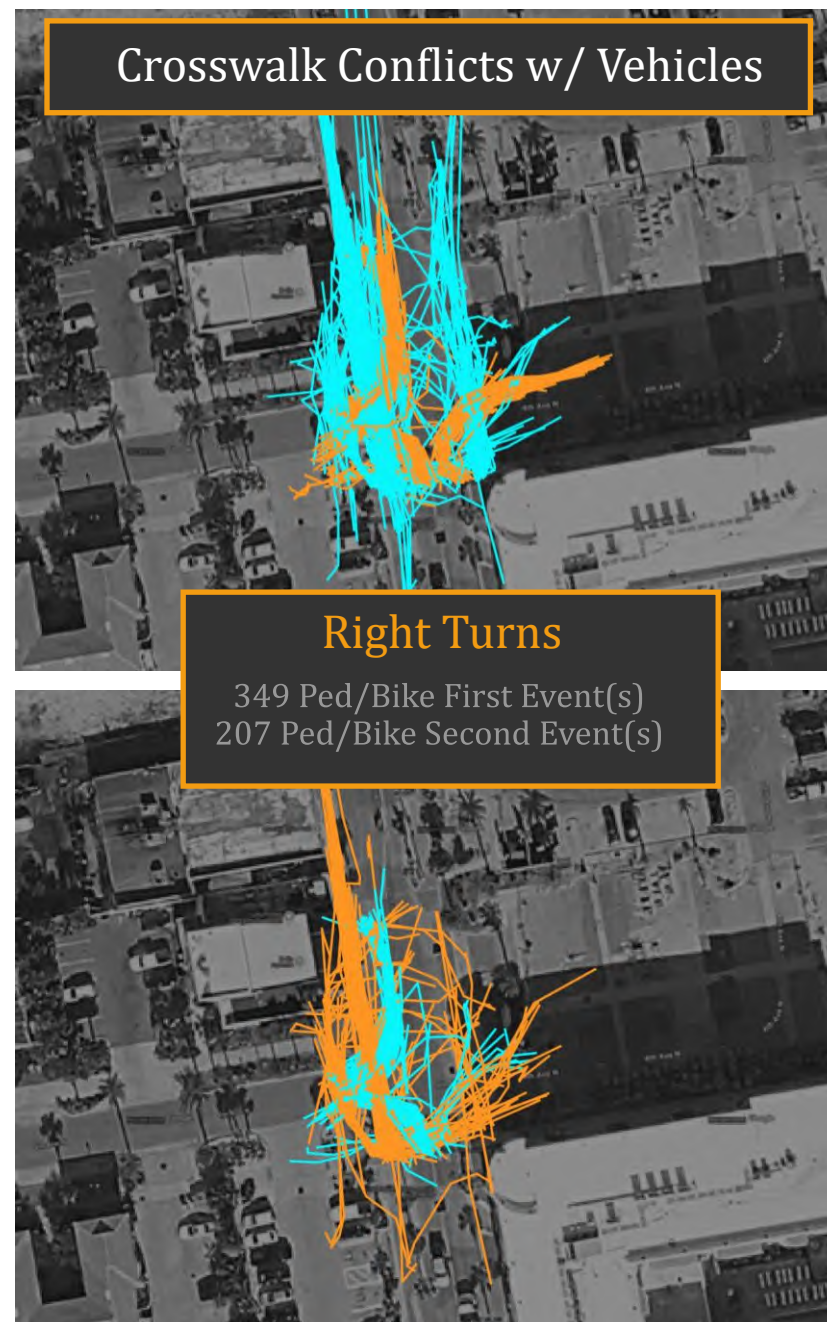
❖ 1st Street North & 4th Avenue North

This intersection exhibited a higher concentration of pedestrian-related near-miss events, particularly within marked crosswalks. Conflicts most frequently involved turning vehicles interacting with pedestrians during permissive movements. These patterns are consistent with higher pedestrian activity levels and the intersection's proximity to key downtown destinations.

❖ 1st Street North & 3rd Avenue North

Near-miss activity at this location included a higher proportion of vehicle-vehicle conflicts, including through-through and turning movement interactions. Video observations also indicated operational friction related to approach speeds and driver compliance, contributing to conflicts during peak activity periods.

Overall, while the specific mix of near-miss events varied between locations, both intersections demonstrated recurring conflicts associated with pedestrian exposure, turning behavior, and operating speed. This reinforces the downtown-wide nature of the observed safety challenges.

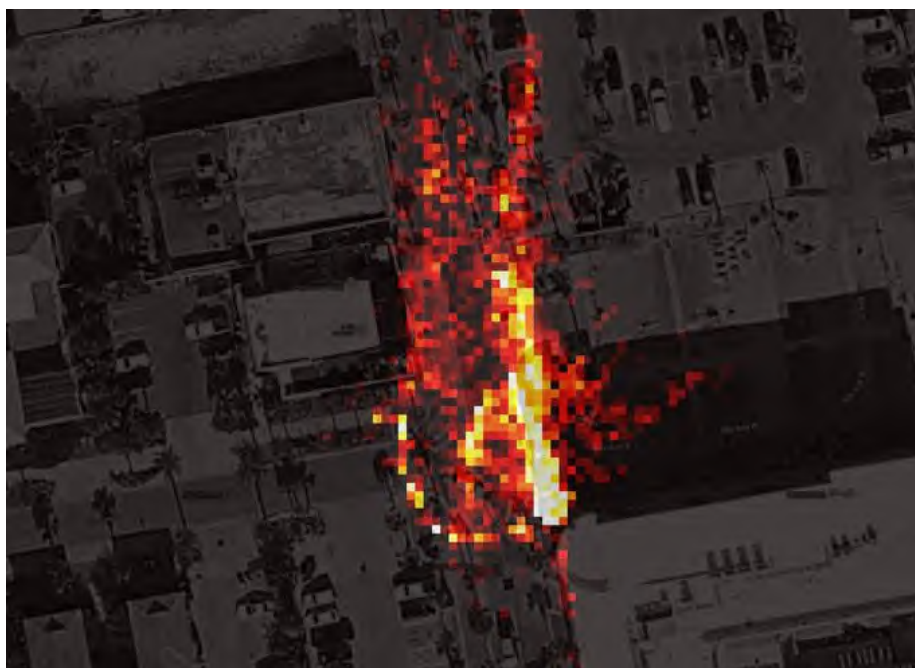


Example conflict diagram of crosswalk conflicts with vehicles at 4th Avenue North. Source: Street Simplified.

Interpretation and Use of Findings

The near-miss analysis provides a detailed view of how conflicts occur within CA-1 on a daily basis, particularly where pedestrian activity overlaps with vehicular turning movements. While the analysis generated a range of proposed countermeasures, the primary value of this effort for the corridor study is in **documenting recurring conflict patterns** rather than prescribing specific treatments.

Key observations from the analysis, particularly related to VRU exposure, turning conflicts, and operating speeds—were used to inform the project team’s understanding of downtown conditions and to support the development of corridor-wide recommendations presented later in this report.



Crossing Off Crosswalk (936 events). Source: Street Simplified.

KEY TAKEAWAYS

- ❖ Frequent near-miss events were observed at downtown intersections with high pedestrian activity.
- ❖ Many safety conflicts are not reflected in reported crash data.
- ❖ Pedestrian exposure and turning-vehicle interactions were the most common conflict types.
- ❖ Near-miss findings informed corridor planning but did not dictate specific design solutions.



Example Turning Movement Counts. Source: Street Simplified.

3.2 Downtown Streetscape Assessment

A comprehensive planning and landscape architecture assessment was performed, which serves as a Downtown Streetscape Assessment to evaluate how streetscape design, pavement materials, and landscape features influence pedestrian safety, multimodal clarity, and circulation within the Downtown Character Area (CA-1). The review examined existing conditions across intersections, streetscapes, parking areas, and related infrastructure, with emphasis on how design intent, visual cues, and material performance shape user behavior over time.

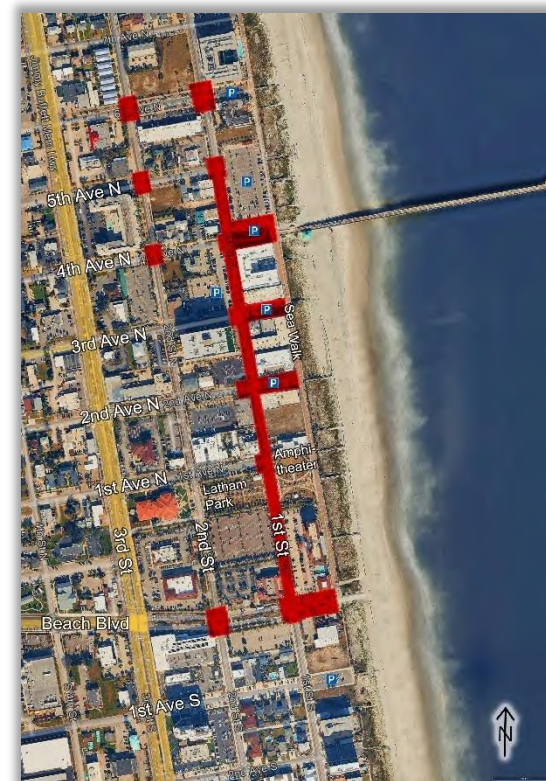
This section summarizes the key observations and themes from that assessment. The full report including detailed evaluations, photographs, and illustrative sketches is provided as a separate document.

Streetscape History and Design Intent

The downtown streetscape reflects a series of planning and redevelopment efforts spanning the past two decades. Foundational documents, including the *Downtown Vision Plan* (2007) and subsequent Downtown Action and Redevelopment Plans, articulated a vision for portions of 1st Street to function as a pedestrian-oriented “festival street,” emphasizing placemaking, visual interest, and reducing vehicle dominance.

Streetscape improvements implemented between approximately 2011 and 2013 translated this vision into a cohesive coastal-themed environment through extensive use of decorative concrete pavers, abstract pavement patterns, integrated landscape features, and limited use of vertical separation such as traditional curbs. Rather than a single standardized treatment, intersections and street segments were designed using a family of related but distinct patterns intended to reinforce downtown identity and encourage cautious vehicle operation through visual complexity and texture.

This design intent continues to shape the character and function of downtown CA-1 and provides important context for understanding how the streetscape communicates movement and safety today.



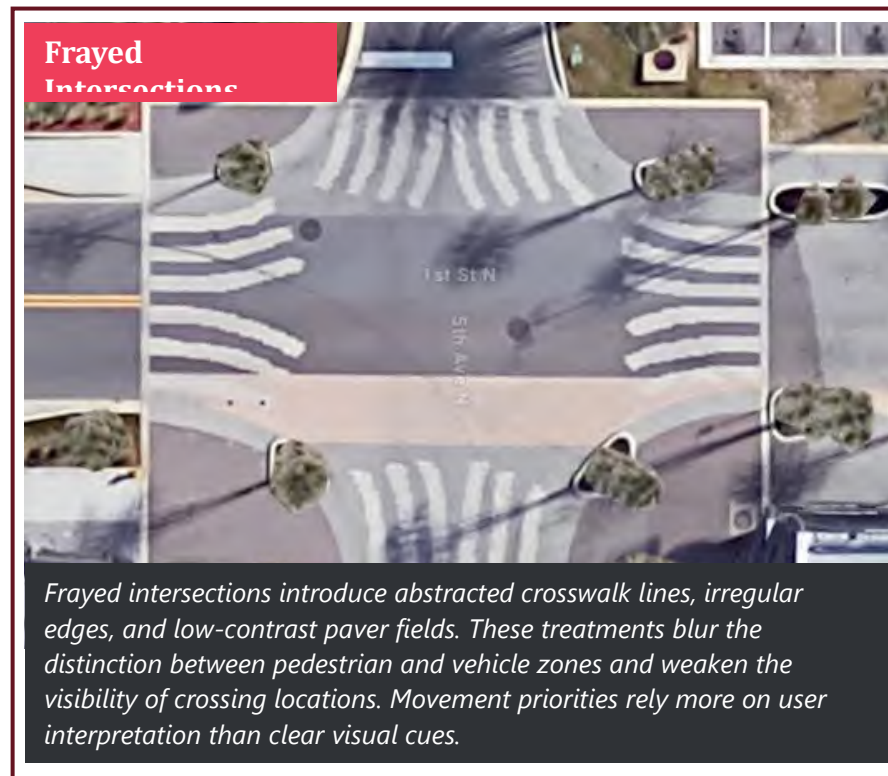
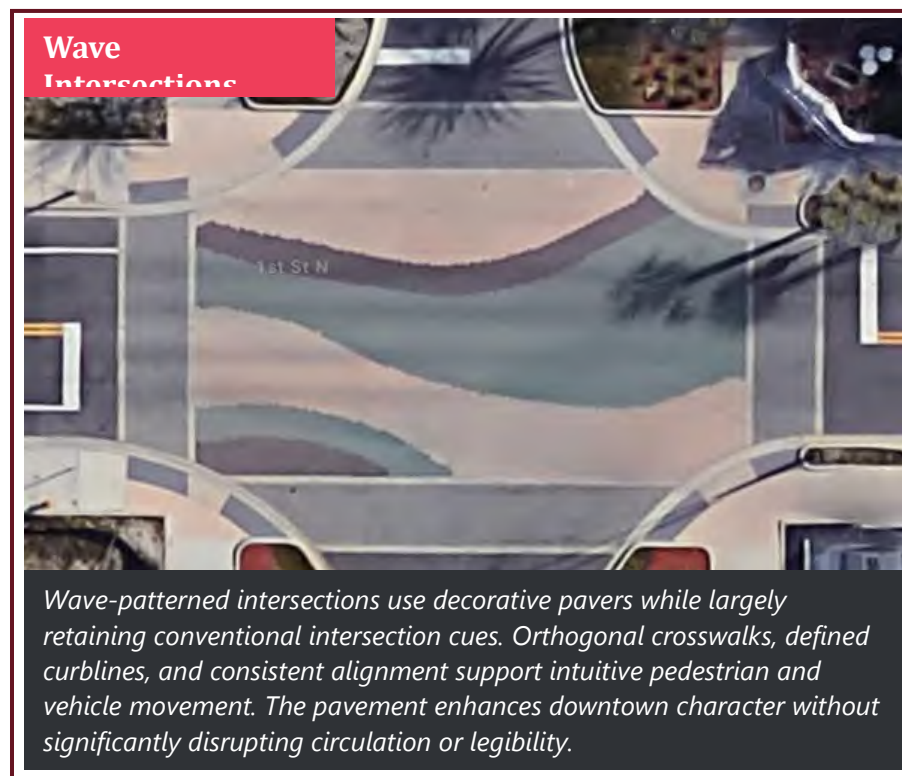
Downtown Streetscape Assessment Study Area.

Intersections

The landscape architecture review identified that pavement treatments play a direct role in shaping intersection flow and wayfinding. Several enhanced intersections deviate from typical intersection “language” by omitting centerlines, bending crosswalk alignments, or introducing angled or circular patterns that do not align with dominant vehicle movements.

From a design standpoint, intersections that retain clearer visual alignment—such as continuous centerlines, orthogonal crossings, and constrained vehicle paths—support smoother and more predictable circulation. Conversely, intersections where decorative patterns obscure lane extension or suggest multiple possible paths can disrupt flow and increase legibility for all users, particularly for drivers unfamiliar with the downtown context.

There are five types of aesthetically enhanced intersections along the corridor: Wave, Frayed, Angled, Circle, and Star.

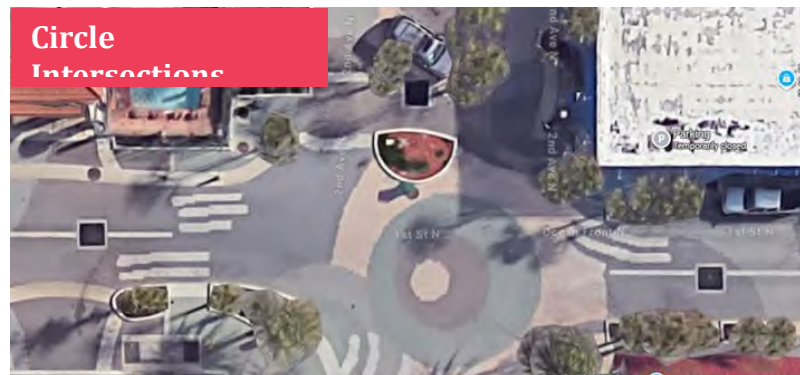


Angled Intersections



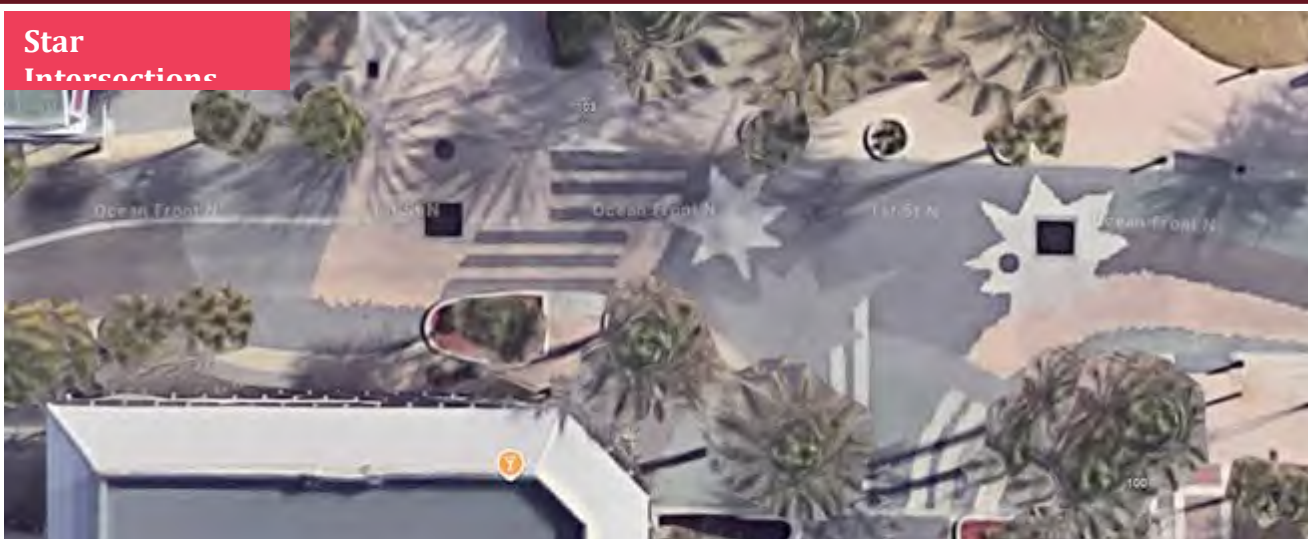
Angled paver bands create visual interest but do not align with dominant vehicle paths. The diagonal pattern disrupts typical roadway expectations and complicates lane continuity through the intersection. As a result, pavement design competes with functional flow cues.

Circle Intersections



Circular paver patterns establish a strong visual focal point but reduce directional clarity. Varied colors and irregular crosswalk placement draw attention to the center rather than reinforcing linear movement. The design prioritizes expression over navigational legibility.

Star Intersections



Star-themed intersections use overlapping geometric patterns and multiple paver colors. Inconsistent crosswalk treatments and limited material contrast obscure the distinction between pedestrian and vehicular space. Visual complexity challenges quick interpretation of movement paths.

KEY TAKEAWAYS

- ❖ **Decorative pavement** serves as a **primary visual cue for movement** and priority in CA-1.
- ❖ Designs that reinforce alignment, contrast, and clear edges **support intuitive circulation**.
- ❖ **Highly abstract patterns** reduce legibility of lanes, crossings, and zone boundaries.
- ❖ **Consistency** in how pavement communicates separation between modes is critical to predictable flow and safety.

Streetscapes

There are two types of aesthetically enhanced streets: Wave and Wave (No Centerline). The evaluation of these is provided below.

Wave



Evaluation: The areas designated for parking are not well defined and could be confused with the pedestrian zone. The entrance drives are also easily mistaken for parking spaces. The spacing of the irregular planters that define the pedestrian zone are spaced to a size that is compatible to parking a car.

Opinion: Use contrasting and consistent paver color to indicate parking spaces. Do not continue the paver color pattern into the pedestrian zones. Consider an alternate paver size, color, or pattern in the pedestrian zones to distinguish the two spaces. Rumble cobbles or contrasting textured pavers could define the edges of parking spaces. What appears to be a paver color (dark gray) to indicate a parking area gets lost when that same color is used abstractly in other areas and relies on seeing the distinction of the flush curb set back from the travel lane. Parallel sized spaces between the planters only encourage parking without a curb or something to better distinguish the pedestrian only zone.

Evaluation: This area is a continuation of the star intersection pattern without the irregular planters. The width of the waves despite the interruption of the crosswalks displays well. The open areas adjacent to this street section are unique and allow for planting outside of the right of way. Visual cues and vertical elements such as light poles and bollards help define the edge between vehicle and pedestrian areas.

Opinion: Cutting the pavers to form a better defined edge would enhance the quality of the thematic wave/ribbon. A consistent centerline would help vehicles navigate more safely and would not interrupt the paver design significantly. Overall the contained paver color pattern to the vehicle zone and the vertical elements do not present the need for any significant safety improvement.



Wave (No Centerline)

Parking Lots

Parking areas were reviewed to assess how pavement materials, layout, and streetscape elements communicate intended use and support safe pedestrian movement. The evaluation found that in several downtown parking areas, the **lack of clear visual hierarchy and definition contributes to uncertainty in how space is intended to function.**

Parking lots with well-defined geometry, differentiated paving, and physical elements such as bollards or wheel stops support more predictable vehicle behavior and clearer pedestrian circulation. However, many existing locations rely primarily on aesthetic pavement patterns or subtle material changes that do not clearly distinguish between driving, parking, and pedestrian zones. As a result, users are often required to interpret how space should be used, rather than relying on intuitive visual cues.

This lack of clear definition has led to observed confusion and informal use patterns, including vehicles encroaching into pedestrian areas and inconsistent parking alignment. Pedestrian routes through parking areas are not consistently emphasized and, in some cases, are difficult to distinguish from adjacent travel or parking areas. This increases the potential for conflicts, as pedestrians and vehicles frequently share space without clear separation.

Overall, the review found that **pedestrian safety and circulation within downtown parking areas are closely tied to the clarity and consistency of visual cues.** Where design elements clearly communicate where to drive, park, and walk, behavior is more orderly and predictable. Where these distinctions are unclear, confusion increases and the likelihood of user conflicts is elevated.

Pier Parking Lot



Evaluation: The central parking could benefit from installing wheel stops to prevent vehicles from encroaching into the pedestrian pathway. The parallel spaces are a good example of how bollards can separate user zones. Two additional spaces could be gained if the end of the central rows were striped.

Other Issues

Other issues identified during the review include: parking in pedestrian zones/sidewalks; parking signs; and curbs & planters.

Parking in Pedestrian Zones/Sidewalks



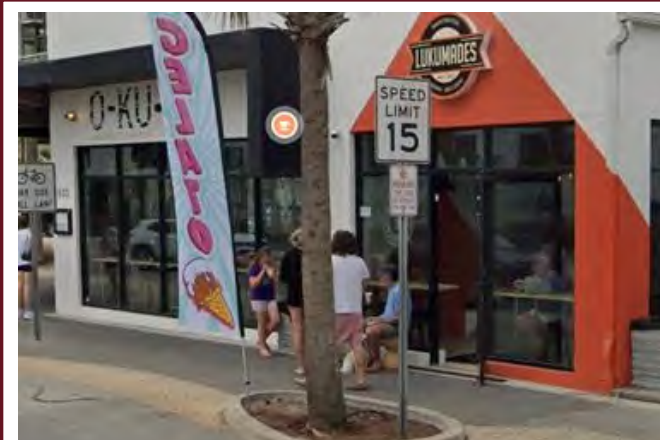
Evaluation: The on-street parking is confusing. The curbless pavement material contrasts are not clear when a driver has to determine if the recess between the planters is shallow or more recessed.

Cars are never supposed to park in the pedestrian zone which is delineated with the tan concrete band in the image. Yet the large gaps between the tree planters and lack of curbs communicate a place to park. Further, when one car is parked in a similar way, that makes it more likely that other drivers will follow what they believe is appropriate.

Curbs &



Description: This image shows the condition where the planter curbs extend beyond the ex-posed aggregate flush curb pedestrian boundary. Spaces in between the planters are also wide enough for a vehicle to park. You can also see a mix of site furniture types, cast concrete seating set back from the street edge and two types of trash receptacles.



Description: Current signage indicates no parking in areas sized to appear suitable for parking and standing. Bollards and street furniture would be a better solution than a sign.

3.3 Field Reviews and Observations

In addition to the near-miss analysis and other technical evaluations, the project team conducted a corridor-wide field review to document on-the-ground conditions and observe how the corridor functions in person. The field review provided an opportunity to confirm, contextualize, and expand upon analytical findings through direct observation of physical features, operational characteristics, and user behavior. Field visits were conducted throughout the study process resulting in a photographic inventory covering the full length of the corridor.

To organize observations in a meaningful and context-sensitive way, findings from the field review are summarized by character area. While individual observations varied by location, several consistent themes emerged across the corridor and are highlighted within each character area summary on the following pages.

This approach reflects how corridor conditions, land use context, and user expectations change along the study corridor and allows recurring patterns, constraints, and opportunities to be identified within each distinct segment. Overall, the field reviews and observations helped ground the project team's understanding of corridor performance and informed the development of recommendations presented later in this report.

KEY TAKEAWAYS

- ❖ **Corridor safety conditions vary by character area**, with user behavior strongly influenced by surrounding context, activity levels, and available multimodal facilities.
- ❖ **Facility continuity plays a central role in multimodal safety**, with gaps in pedestrian and bicycle infrastructure shaping how users navigate and share space.
- ❖ **In the downtown core (CA-1)**, frequent overlap between pedestrians, bicyclists, vehicles, and parking results in complex shared-space conditions that rely heavily on user negotiation.
- ❖ **In transitional areas (CA-2)**, clearer multimodal structure supports more predictable travel patterns, with safety considerations concentrated at access points, driveways, and crossings.
- ❖ **In residential segments with limited infrastructure (CA-3 and CA-4)**, pedestrians and bicyclists frequently utilize roadway space or informal edge areas, reflecting the influence of facility gaps and edge conditions on perceived safety and comfort.

Character Area 1 (CA-1) | Beach Boulevard to 5th Avenue N

The Downtown Character Area (CA-1) represents the most active and complex segment of the corridor, accommodating high pedestrian volumes, frequent bicycle activity, curbside parking, and concentrated vehicle turning movements within a compact right-of-way. Field observations focused on how these overlapping functions operate and how users negotiate space within the downtown context.

Blended Multimodal Space

Pedestrian, bicycle, vehicular, and parking areas frequently overlap within CA-1, with limited visual separation between modes. Paving treatments and surface transitions suggest shared space conditions but do not consistently establish priority or expected behavior, resulting in informal and negotiated movement patterns.

Crossing Visibility and Surface Treatments

Crosswalks within the downtown core utilize a variety of decorative and non-standard markings that differ in material, color, and pattern. While visually distinctive, these treatments do not consistently communicate crossing locations or right-of-way expectations to approaching drivers.

Curbside Access and Parking Definition

Curbside parking areas and access points associated with existing or former parking facilities introduce additional complexity within CA-1. In several locations, the transition between driving areas, parking zones, and pedestrian space is unclear, contributing to



Character Area 1 Field Review Observations

Curbside parking areas and access points adjacent to pedestrian space contribute to unclear vehicle entry, exit, and circulation.



Character Area 2 Field Review Observations

Character Area 2 (CA-2) | 10th Avenue S to Beach Boulevard; 5th Avenue N to Seagate Avenue

Character Area 2 (CA-2) serves as a transitional segment between the Downtown Character Area (CA-1) and adjacent residential neighborhoods, extending both north and south of the downtown core. The corridor continues to support multimodal travel through a combination of narrow vehicular travel lanes, designated bicycle lanes, sidewalks on both sides of the street, and limited on-street parking. Field observations focused on how this transitional context influences corridor function, user behavior, and interactions between travel modes.

Clear Multimodal Structure within a Constrained Corridor

Field observations indicate that CA-2 provides a more clearly defined multimodal environment than the downtown core, with marked bicycle lanes and continuous sidewalks contributing to greater separation between modes which may lead to fewer conflicts.

Transitional Context and User Behavior

The surrounding residential land uses, increased building setbacks, and less activity contribute to a noticeable shift in corridor character from CA-1. Pedestrian volumes are lower and more dispersed, while bicycle and vehicle movements appear more linear and purpose-driven. These conditions reflect CA-2's role as a connector between activity centers rather than a primary destination.

Access Points and Corridor Interruptions

Mid-block segments of CA-2 generally operate in a predictable and orderly manner. Field observations indicate that most interactions between vehicles, bicyclists, and pedestrians are concentrated at residential driveways, side streets, and on-street parking areas, where vehicles entering and exiting movements intersect designated bicycle and pedestrian space.



Streetview of CA-2. Project Team.

Building setbacks, lower pedestrian activity, and continuous sidewalks reflect the residential and transitional character of CA-2 as the corridor shifts away from the downtown core.

Residential access points and side streets intersect the travel way and bicycle lanes in CA-2, concentrating multimodal interactions at specific points along an otherwise linear corridor.

Character Area 3 (CA-3) | 25th Avenue S to 16th Avenue S

Character Area 3 (CA-3) represents a predominantly residential segment of the corridor, characterized by a mix of medium- and lower-density development. While the roadway includes designated bicycle lanes on both sides of the street, sidewalks are generally absent or discontinuous. Field observations noted how the continuity of multimodal facilities including and gaps in pedestrian infrastructure influence user behavior and perceived safety within this segment.

Bicycle Facility Continuity

CA-3 includes continuous, striped bicycle lanes on at least one side that provide consistent accommodation for bicycle travel through the corridor. These facilities were observed to be actively used by people walking and biking.

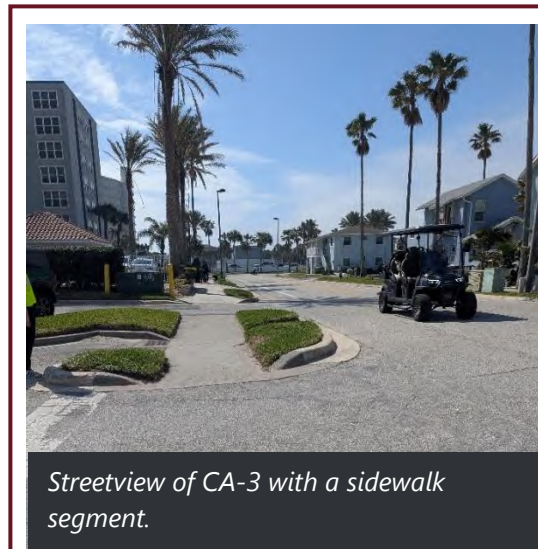
Pedestrian Infrastructure Gaps

Pedestrian infrastructure within CA-3 is limited or discontinuous. Sidewalks are absent in several locations, resulting in pedestrians traveling within bicycle lanes, along roadway edges, or through informal shoulder areas. These conditions highlight a lack of continuous, dedicated pedestrian space despite observed pedestrian activity.

Implications for Multimodal Safety

The combination of continuous bicycle lanes and limited pedestrian facilities concentrates interactions between pedestrians and bicyclists within shared roadway space. While overall activity levels are lower than in CA-1 and CA-2, these conditions suggest that pedestrian and bicycle movements are frequently accommodated through informal sharing of space, with safety and comfort influenced by user awareness rather than physical separation.

Character Area 3 Field Review Observations



Character Area 4 (CA-4) | Ponte Vedra Boulevard to 25th Avenue S

Character Area 4 (CA-4) represents a low-density residential segment of the corridor with a more suburban roadway context. Multimodal facilities are limited, with sidewalks generally absent and bicycle accommodation provided through a painted shoulder in select segments. Field observations focused on how these conditions influence pedestrian and bicycle movements and the safety and continuity of multimodal travel.

Low-Intensity Multimodal Environment

CA-4 functions primarily as a neighborhood residential street, characterized by single-family development, on-street parking, and relatively low activity levels. Vehicular movements appear steady and predictable, with fewer turning conflicts and destination-oriented trips than in other portions of the corridor.

Limited Pedestrian and Bicycle Facility Continuity

CA-4 generally lacks dedicated pedestrian infrastructure. Sidewalks are absent along much of the corridor, and bicycle accommodation is limited to a narrow paved shoulder. Field observations indicate that pedestrians and bicyclists often share roadway space or utilize informal areas near the pavement edge, reflecting gaps in multimodal facility continuity.

Roadway Edge Conditions and Safety Considerations

Drainage features, roadside swales, and uneven pavement edges were observed along portions of CA-4. These conditions further constrain usable roadway space at the corridor edge and influence where pedestrians and bicyclists travel, particularly during wetter conditions.

Character Area 4 Field Review Observations



Roadway edge in South Jacksonville Beach.



Streetview of a typical CA-4 section.



4.0 Improvement Concepts

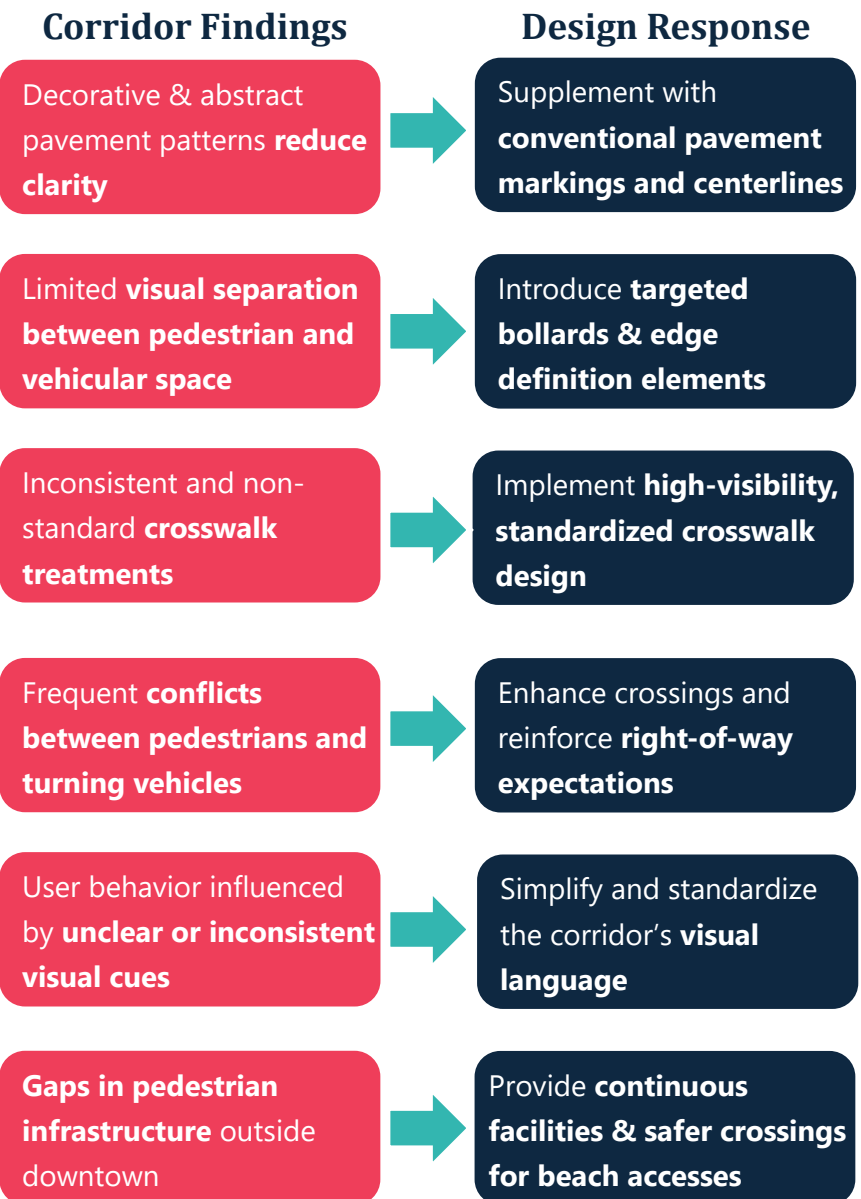
4.0 Improvement Concepts

The corridor evaluation detailed in Section 3 identified key themes related to multimodal conflict, particularly in the downtown area Jacksonville Beach, where decorative pavement treatments, limited visual separation between modes, and non-standard design elements can reduce clarity and increase user uncertainty.

While reported crash data indicates relatively low speeds and limited severe safety issues, the supplemental analysis documenting the near-miss observations demonstrate that conflicts occur more frequently than crash history alone reflects, particularly between pedestrians and turning vehicles. Across the corridor, user behavior was observed to be strongly influenced by the clarity and consistency of visual cues, facility continuity, and the definition of space for each mode.

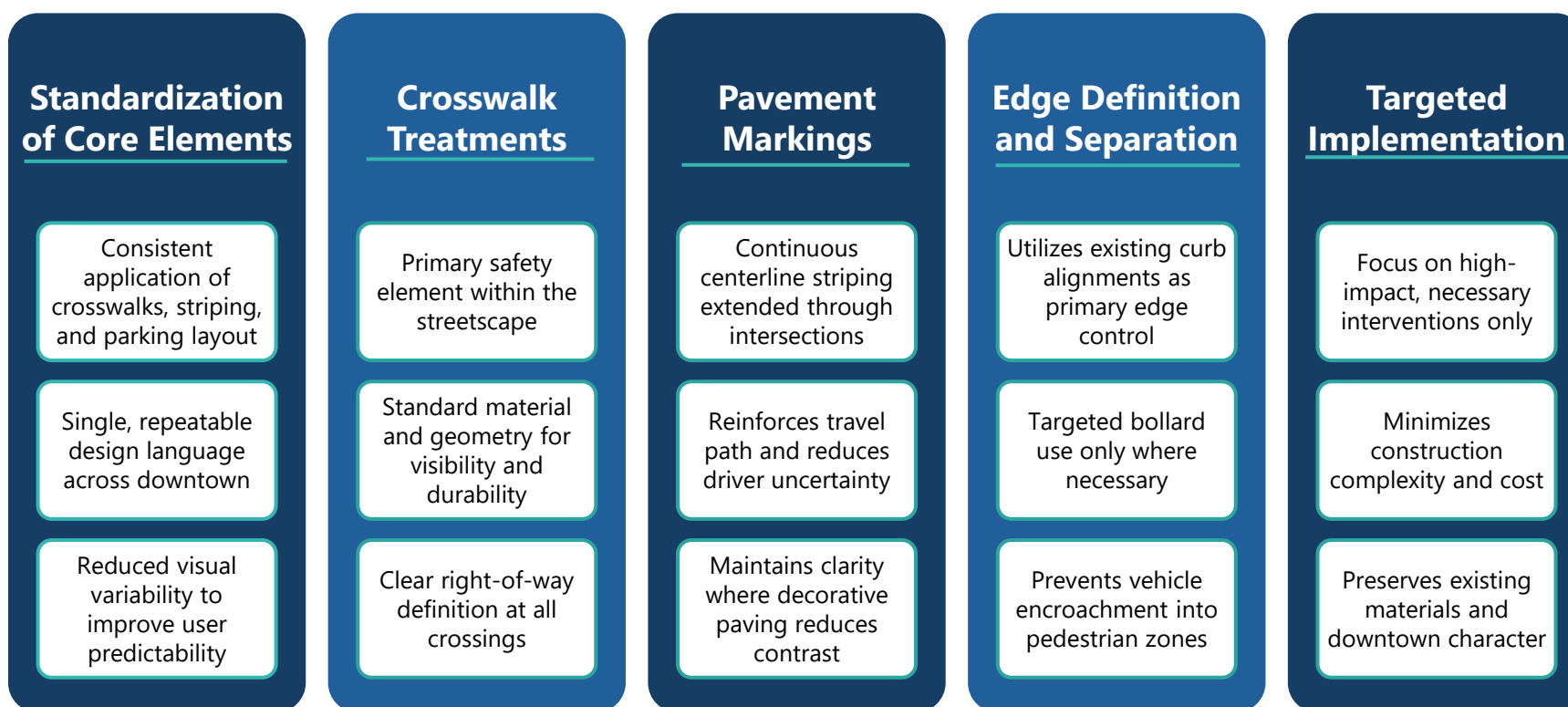
In response to these findings, the **recommended improvements focus on reinforcing modal separation, enhancing crossing visibility, and introducing clear, consistent design elements that improve user understanding of the corridor.** These strategies are intended to reduce ambiguity, support safer and more predictable multimodal interactions, and maintain the corridor's character and flexibility.

The improvements detailed in this section are organized into two categories: streetscape and safety improvements for the downtown area (CA-1) and multimodal safety improvements for the remainder of the study area (CA-2 through CA-4: Seagate Avenue to 7th Avenue North and 1st Avenue South to Ponte Vedra Boulevard).



4.1 Downtown Streetscape Improvement Concepts (CA-1)

The downtown streetscape improvement concepts were developed as part of the *Downtown Streetscape Assessment* portion of this study. These concepts provide a coordinated set of design strategies to improve safety, legibility, and user clarity within the downtown environment while maintaining the existing streetscape character. These concepts define a consistent approach to key elements including crosswalks, centerline markings, edge conditions, and parking delineation that will strengthen visual cues and reduce ambiguity for both pedestrians and drivers. These concepts are focused around five key themes:





6th Avenue N Streetscape Concept



Proposed Improvements

❖ None on this sheet

5th Avenue N Streetscape Concept



Proposed Improvements

- ❖ Install herringbone pattern paver crosswalks
- ❖ Install additional thermoplastic centerline and parking striping
- ❖ Install new bollards

4th Avenue N Streetscape Concept



Proposed Improvements

- ❖ Install herringbone pattern paver crosswalks
- ❖ Install additional thermoplastic centerline and parking striping
- ❖ Install new bollards
- ❖ Install new stopbar
- ❖ Move existing planter on NW corner of 4th Avenue

3rd Avenue N Streetscape Concept



Proposed Improvements

- ❖ Install herringbone pattern paver crosswalks
- ❖ Install additional thermoplastic centerline and parking striping
- ❖ Install new bollards
- ❖ Remove existing bollards
- ❖ Remove existing island on 3rd Avenue

2nd Avenue N Streetscape Concept



Proposed Improvements

- ❖ Install herringbone pattern paver crosswalks
- ❖ Install additional thermoplastic centerline and parking striping
- ❖ Install new bollards
- ❖ Restore curb on island on 2nd Avenue

1st Avenue N Streetscape Concept



Proposed Improvements

- ❖ Install herringbone pattern paver crosswalks
- ❖ Install additional thermoplastic centerline and parking striping
- ❖ Install new bollards



South of 1st Avenue N Streetscape Concept

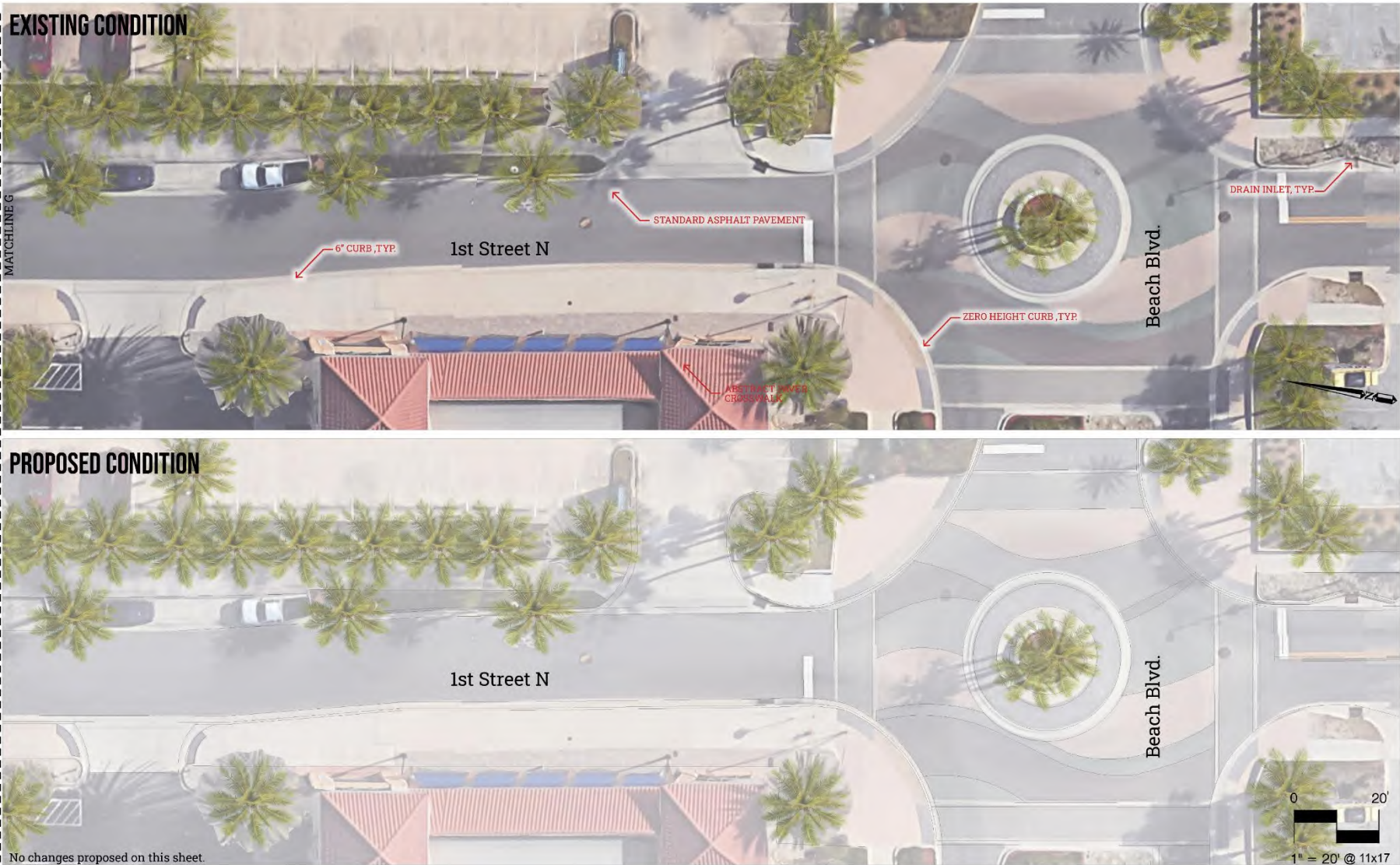


Proposed Improvements

- ❖ None on this sheet



Beach Boulevard Streetscape Concept



Proposed Improvements

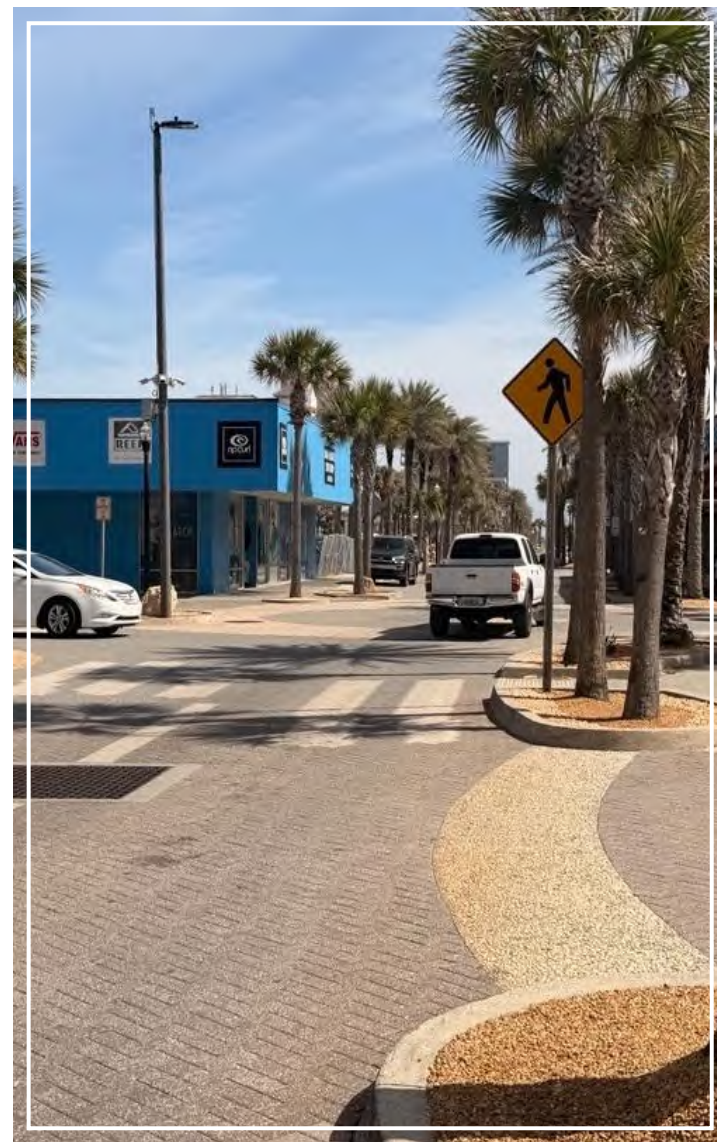
❖ None on this sheet

4.2 Roadway Concepts

The remainder of the First Street corridor outside of the Downtown Character Area (CA-1) was evaluated to identify how existing roadway conditions, facility continuity, and user behavior influence pedestrian and bicycle safety. As documented in Section 3, these areas generally exhibit more structured multimodal operations than the downtown core. However, gaps in pedestrian infrastructure, inconsistent crossing opportunities, and localized conflicts at beach access points continue to affect safety and predictability.

Field observations and corridor evaluation findings indicated that outside of the downtown core, corridor operations are generally more predictable, with defined travel paths for each mode. However, there were safety concerns identified at specific locations, such as beach accesses, intersections, driveways, and marked crossing points where multimodal interactions are more frequent. In these areas, limited crossing visibility and gaps in pedestrian infrastructure contribute to uncertainty in how users navigate the corridor, particularly in residential segments where sidewalks are discontinuous and pedestrians often travel along the roadway edge.

In response to these findings, a series of targeted improvement concepts were developed to address specific gaps and reinforce safer, more intuitive corridor use. **These concepts focus on enhancing crossing visibility, improving access and continuity for pedestrians, and introducing traffic calming elements (such as raised crosswalks) where appropriate to better manage vehicle speeds and reduce conflict potential.** The proposed improvements are intended to strengthen multimodal connectivity, clarify user expectations, and provide safer, more predictable travel conditions along the corridor.





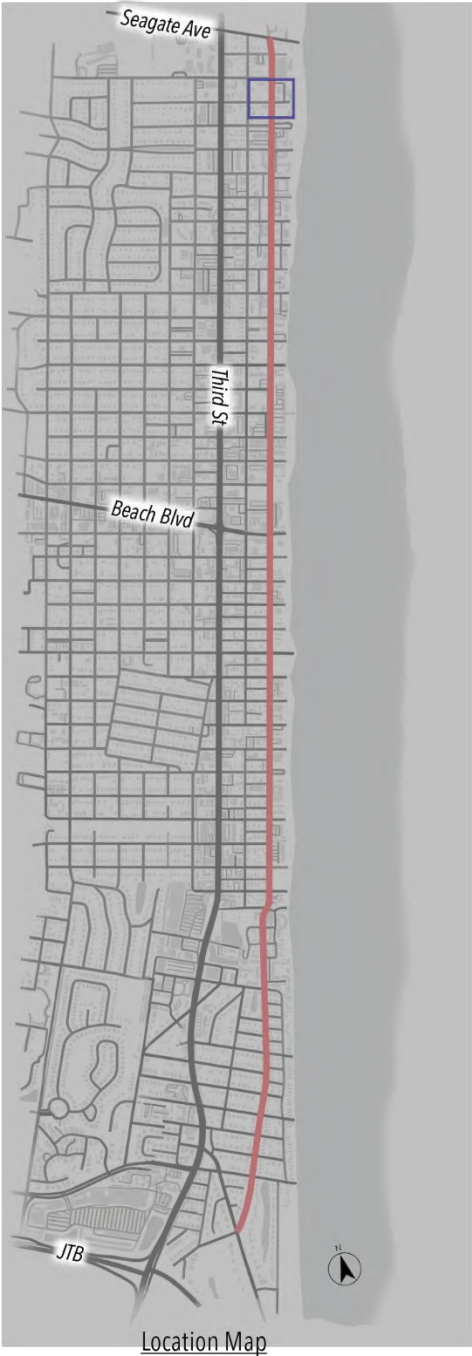
18th Avenue North to 17th Avenue North - Character Area 2



Add crosswalk



Add crosswalks





16th Avenue North to 15th Avenue North - Character Area 2



Add crosswalks
Add raised island to delineate parking area



Add crosswalk





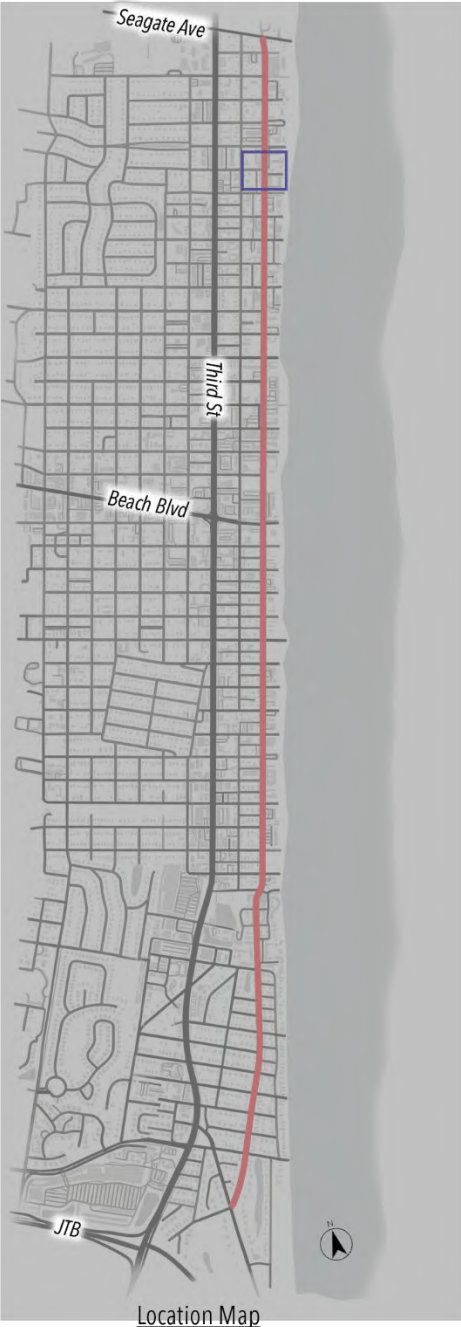
14th Avenue North to 13th Avenue North - Character Area 2



Add crosswalk
Add raised crosswalk



Add crosswalks
Add raised island to delineate parking area





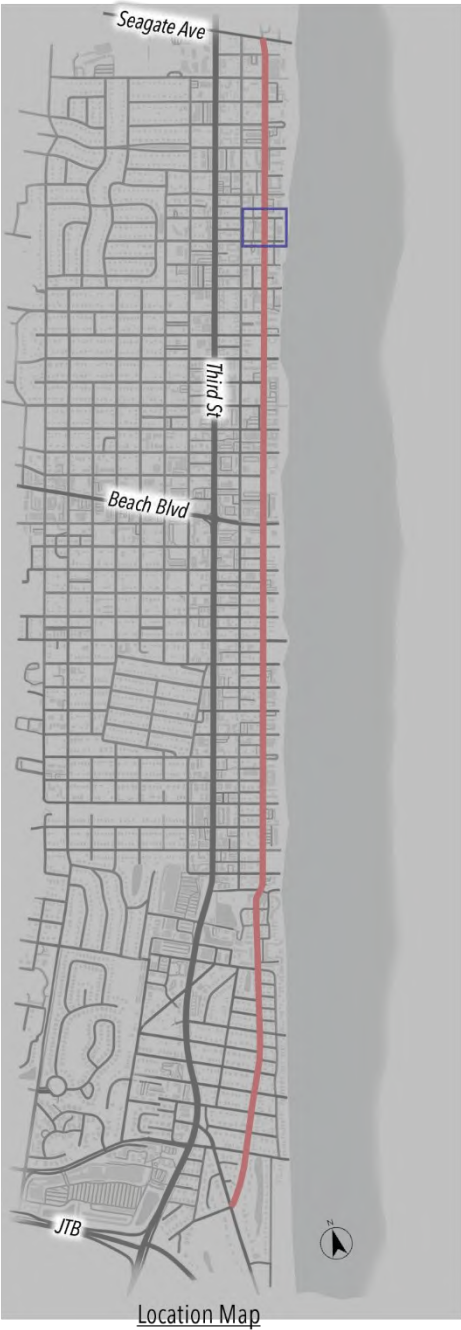
12th Avenue North to 11th Avenue North - Character Area 2



Add crosswalk
Reconstruct curb on SW corner



Add crosswalks
Add raised crosswalk

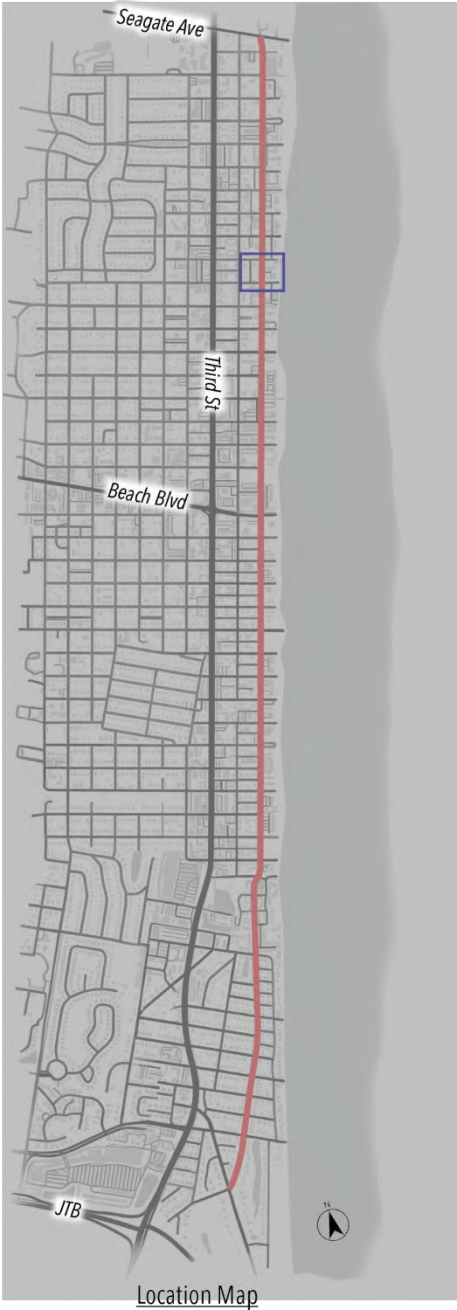




10th Avenue North to 9th Avenue North - Character Area 2



Add crosswalks
Reconstruct curbs on NW and SW corners

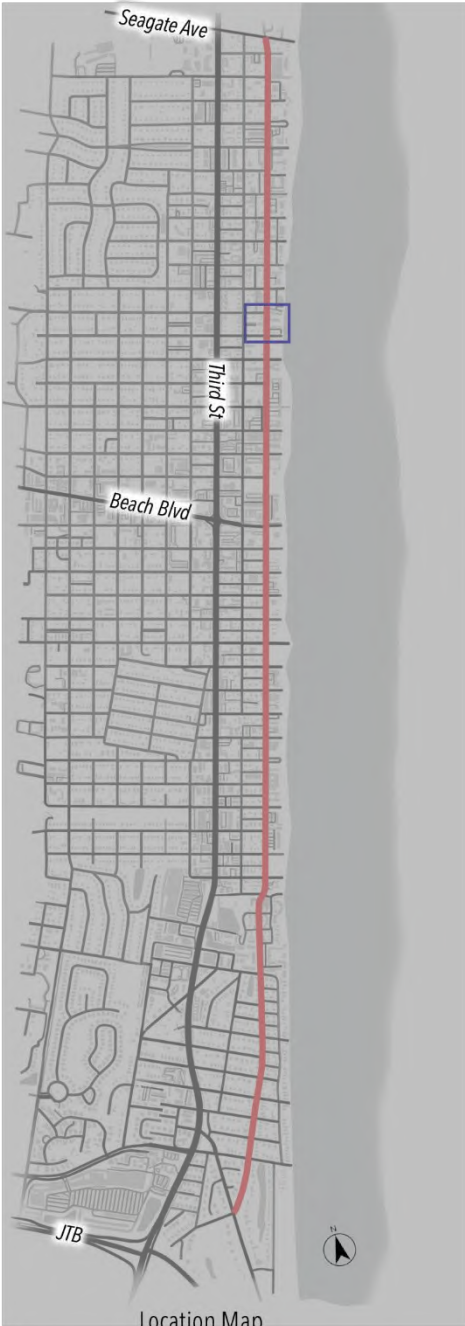




8th Avenue North to 7th Avenue North - Character Area 2



Add raised crosswalk



Location Map



1st Avenue South to 2nd Avenue South - Character Area 2



Add raised crosswalk

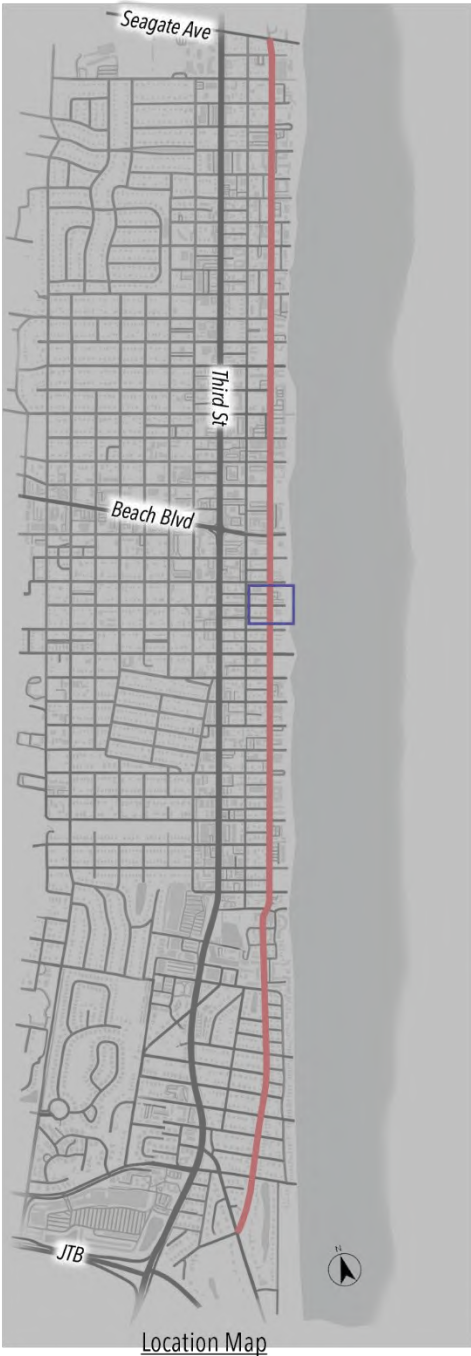




3rd Avenue South to 4th Avenue South - Character Area 2



Add raised crosswalk





5th Avenue South to 6th Avenue South - Character Area 2



Add raised crosswalk





7th Avenue South to 8th Avenue South - Character Area 2



**This aerial image does not reflect recently painted crosswalks*



Add raised crosswalk





9th Avenue South to 10th Avenue South - Character Area 2



**This aerial image does not reflect recently painted crosswalks*



Add raised crosswalk





11th Avenue South to 12th Avenue South - Character Area 2



Add raised island to delineate parking area





13th Avenue South to 14th Avenue South - Character Area 2



Add crosswalks
Add raised island to delineate parking area

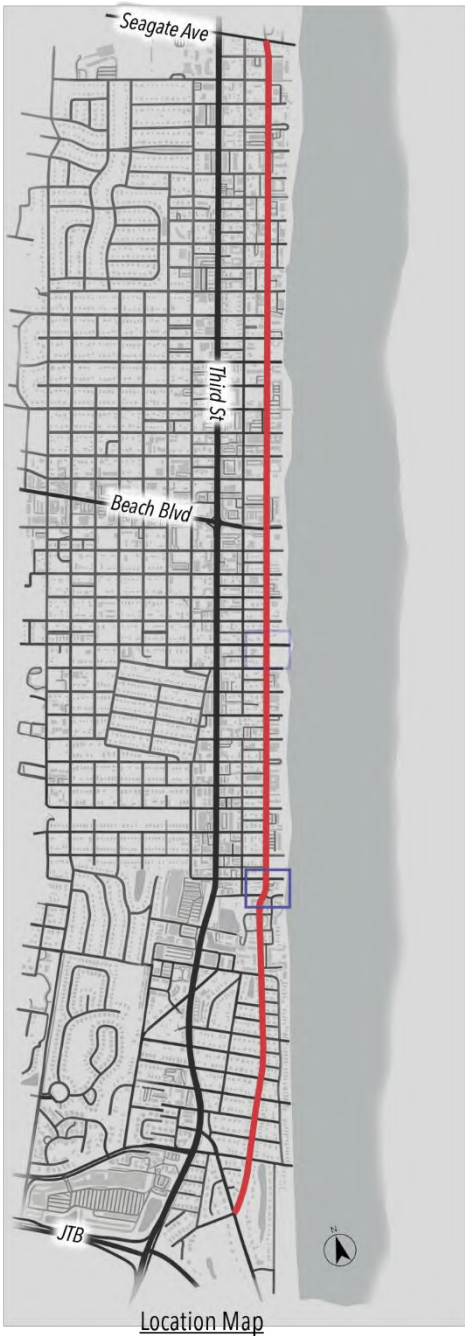




15th Avenue South to 16th Avenue South - Character Area 2



Add crosswalks



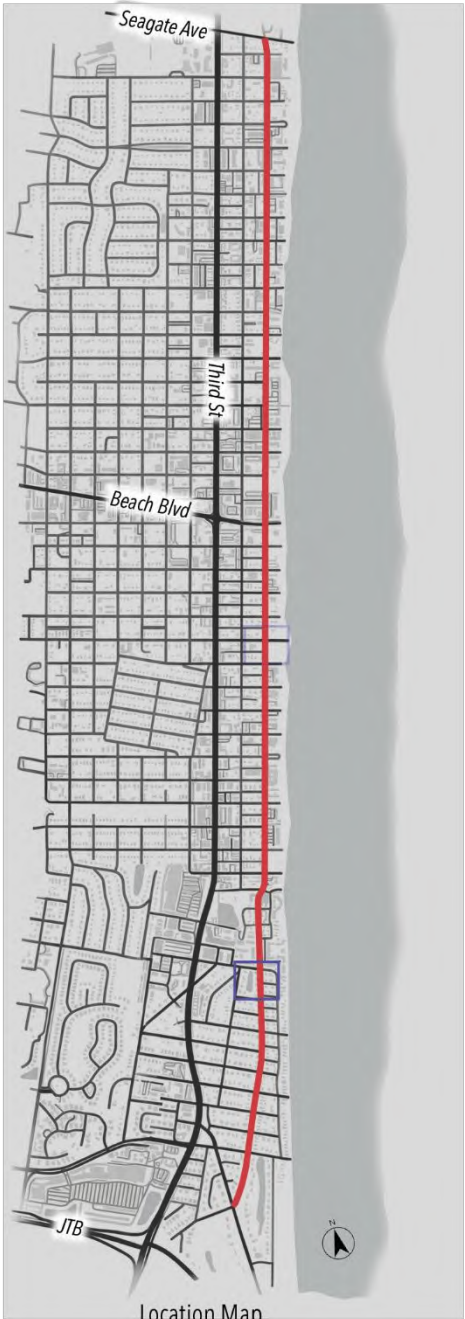


25th Avenue South to 28th Avenue South - Character Area 4



Add 8' on-street multimodal path (green paint optional)

Narrow parking lane



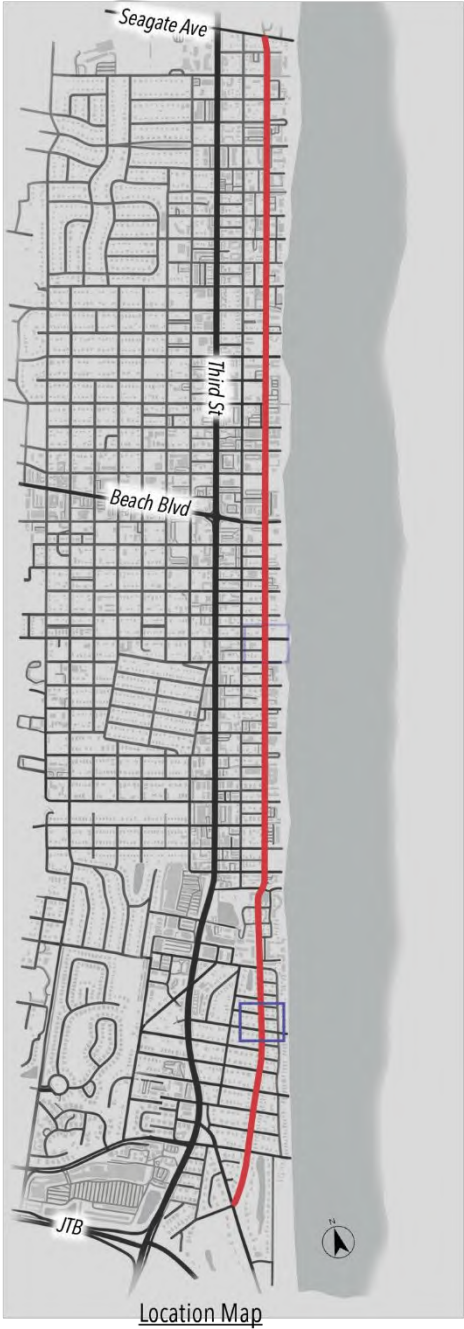


28th Avenue South to 30th Avenue South - Character Area 4



Add 8' on-street multimodal path (green paint optional)

Narrow parking lane





31st Avenue South to 33rd Avenue South - Character Area 4



Add 8' on-street multimodal path (green paint optional)

Narrow parking lane



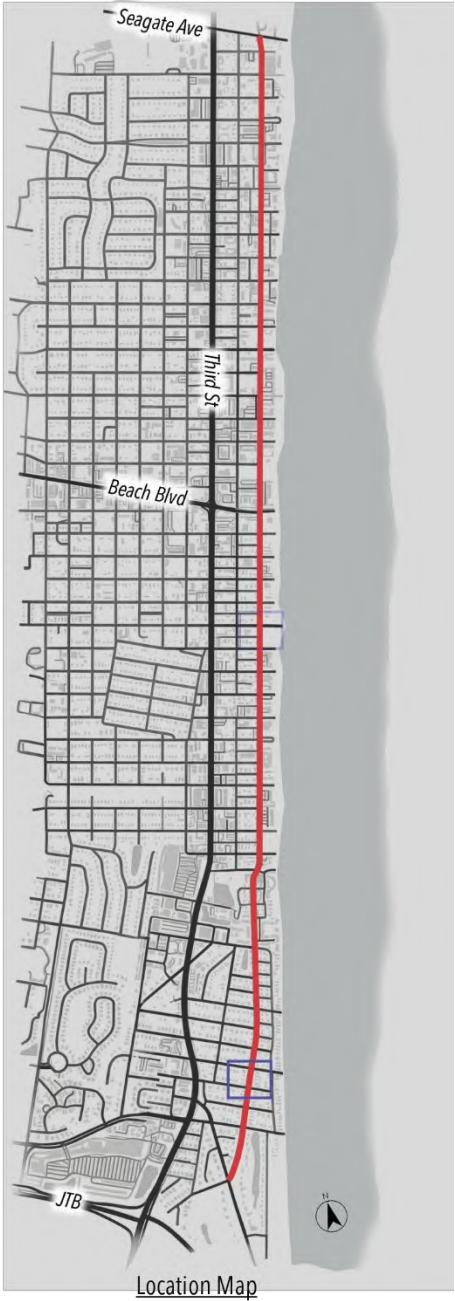


34th Avenue South to 35th Avenue South - Character Area 4



Add 8' on-street multimodal path (green paint optional)

Add 2' buffer between pathway and travel lane



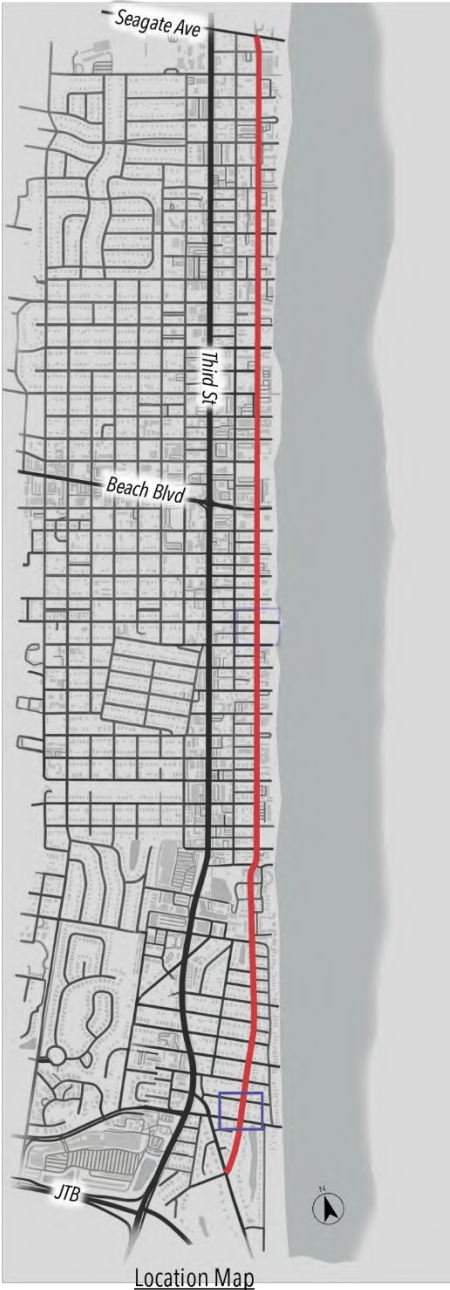


36th Avenue South to 37th Avenue South - Character Area 4



Add 8' on-street multimodal path (green paint optional)

Add 2' buffer between pathway and travel lane



5.0 Conclusion

The recommended improvements outlined in this report are grounded in a comprehensive evaluation of corridor conditions, user behavior, and multimodal interactions along First Street. As documented throughout the study, safety conditions along the corridor are influenced less by systemic crash patterns and more by how clearly the roadway communicates expected use to people walking, biking, and driving.

In the downtown core, the corridor's flexible, event-oriented streetscape and decorative design elements contribute to its unique character but can also reduce the clarity of how space is intended to be used during typical, non-event conditions. In other areas of the corridor, more traditional roadway geometry supports generally predictable operations; however, gaps in pedestrian infrastructure, inconsistent crossing opportunities, and localized conflicts at intersections and access points remain key considerations.

The recommended improvements respond directly to these observed conditions by focusing on enhancing corridor legibility, reinforcing separation between modes where appropriate, and improving visibility at key conflict locations. Strategies such as introducing conventional pavement markings, standardizing high-visibility crosswalks, incorporating targeted bollards, and implementing traffic calming measures (such as raised crosswalks) are intended to clarify user expectations and support safer, more predictable interactions.

Overall, these context-sensitive improvements are designed to build upon the corridor's existing character while providing clearer visual cues and more consistent guidance for all users. By improving how the corridor communicates movement, priority, and space, the proposed recommendations support a safer, more intuitive, and more comfortable multimodal environment along First Street.



5.1 Implementation Plan

The improvements discussed in the previous section should be implemented in a phased approach utilizing short, medium, and long-term time horizons.

Table 5-1 Implementation Plan

Type	Improvement	Location(s)	Near-Term	Mid-Term	Long-Term
Intersection Improvement	Simple, high-emphasis crosswalk	19th – 10th Avenue North			
		7th Avenue North			
		14th & 15th Avenue South			
	Raised crosswalk addition	14th Avenue North			
		11th Avenue North			
		7th Avenue North			
		1st Avenue South			
		3rd Avenue South			
		5th Avenue South			
		8th Avenue South			
		10th Avenue South			
	Move stop bar and stop sign	19th Avenue North			
Connectivity	Reconstruct curb/sidewalk	12th Avenue North			
		10th Avenue North			

Type	Improvement	Location(s)	Near-Term	Mid-Term	Long-Term
Parking Lot Improvement	Add raised island to delineate parking lot	19th Avenue North			
		16th Avenue North			
		13th – 14th Avenue North			
Downtown Streetscape Improvements	Crosswalks	5th Avenue North			
		4th Avenue North			
		3rd Avenue North			
		2nd Avenue North			
		1st Avenue North			
	New bollard type	5th Avenue North to 1st Avenue North			
	Thermoplastic centerline	5th Avenue North to 4th Avenue North			
		3rd Avenue North			
		2nd Avenue North			
	Thermoplastic parking striping	5th Avenue North to 1st Avenue North			
	Stopbar	4th Avenue North			
		3rd Avenue North			
		2nd Avenue North			
	Move planter	4th Avenue North			
	Removable bollards	In front of building at 333 1st Street			