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

The objective of this study is to evaluate traffic safety conditions and recommend improvements around senior living facilities that have been identified as priority locations to minimize potential for future crash occurrences and severity by recommending improvements.

The November 2017 Aging Road Users Strategic Safety Plan, completed by the Miami-Dade County (MDC) Transportation Planning Organization (TPO), revealed that 11% of all crashes in MDC between 2008-2014 occurred within ¼ mile of older adult living centers. With the increasing trend in overall number of crashes involving 65 and older road users and continuously growing older adult population in the state, the MDC TPO recognizes the need to further investigate road conditions and identify locations to invest in improved safety for older adults.

The MDC TPO analyzed the crash data in the vicinity of over 140 older adult residential living centers and applied a weighted scoring system considering total crashes and crashes involving 65 and older road users within ¼ mile of an older adult living facility. The results of the scoring were a field analysis priority list of assisted living sites. Centers at the top of the priority list were considered “Tier 1” sites. Road Safety Audits (RSAs) were recommended to be conducted at the Tier 1 sites followed by Tier 2 and 3 if resources allow. The five (5) older adult living centers included under the Tier 1 sites list are:

- Joe Moretti II (240 SW 9th Street, Miami, FL 33130)
- Buena Vista Apartments (521 SW 6th Street, Miami, FL 33130) ¹
- Hialeah Residence (1280 W 46th Street, Hialeah, FL 33012)
- Vivian Villas (4650 W 12th Avenue, Hialeah, FL 33012) ²
- Jasmine (128 SW 22nd Avenue, Miami, FL 33135)

A RSA is defined as a formal qualitative safety performance examination of a road or intersection. RSAs are conducted by an independent, multidisciplinary team composed of the stakeholders (state and local jurisdictions, law enforcement, community groups, etc.). The goal of an RSA is to identify and report potential road safety issues and opportunities for safety improvement for all road users. These RSAs were commissioned through the FY2019/2020 Unified Planning Work Program to develop short-term maintenance, near-term project, and long-term project suggestions to improve safety for all transportation users.

The multidisciplinary team or Study Advisory Committee (SAC) coordination included representatives from the following agencies and community groups to maximize the range of perspectives:

- FDOT District Six Office (Traffic Operations and Design offices)
- Department of Transportation and Public Works Engineering and Planning Divisions

¹ The Buena Vista Apartments study area overlapped with the Joe Moretti II study area. A single report is provided for these facilities.
² The Vivian Villas study area overlapped with the Hialeah Residence study area. A single report is provided for these facilities.
Five tasks were performed to complete this project:

1. **Background Research** - a review of the following documents was completed in preparation for the RSAs:
   - 2017 Miami-Dade Aging Road User Strategic Safety Plan;
   - FHWA Road Safety Audit Guidelines;
   - current version of the FDOT Florida Design Manual, Miami-Dade Public Works Manual and the NACTO Urban Street Design Guide; and
   - 2019 Transportation Improvement Program and 2040 Long Range Transportation Plan.
     - No planned projects were identified to be relevant to the study location.

2. **Data Collection** - the following data was collected and summarized:
   - Roadway characteristics: roadway lanes, sidewalks, transit service and features, speed limit, intersection control, crosswalks, safety features, and landscaping;
   - Available traffic volumes, including auto, pedestrian, bicycle and transit ridership;
   - Crash data – Signal 4 Analytics, historical crash trends for the most recent full 5 years was analyzed; and
   - Existing and planned land use including significant destinations.

3. **Community Meetings** - the SAC conducted the outreach to the older adult living facilities, presented the data collected and gathered information regarding safety concerns from the older adult living facilities’ residents and staff. Below are some pictures taken during these meetings. At the time of the field reviews and completion of this report, the Jasmine site was under construction and no community meeting was held for this facility.
4. **Field Reviews** - these were conducted during nighttime, daytime peak period, and day-time off-peak period with the support of the SAC. For each older adult living facility, a pre-audit meeting was conducted to de brief the SAC of the historical crash data, trends, and any additional information collected. Below are some pictures of the field review team.

![](image1)

5. **Documentation & Recommendations** - the team conducted an audit analysis with the background research information, collected data, and field review notes. A list of countermeasures to improve safety within the study area was developed for each older adult living facility. The following table provides a summary of the recommended improvements by location in order to address the identified safety concerns. The recommendations include both location specific and general/area wide items.

<table>
<thead>
<tr>
<th>Improvements</th>
<th>Joe Moretti II and Buena Vista</th>
<th>Hialeah Residence and Vivian Villas</th>
<th>Jasmine</th>
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</thead>
<tbody>
<tr>
<td>Area wide</td>
<td>11</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Location Specific</td>
<td>47</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>TOTAL</td>
<td>58</td>
<td>34</td>
<td>29</td>
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This report presents the findings from the RSAs and detailed observation notes to support the proposed improvements. Each engineering improvement identified in this study is classified into one of three categories:

- **Short-Term or Maintenance Project** – it is anticipated that issues identified for maintenance may be addressed on a short timeframe and at a relatively low cost.
- **Near-Term Project** – activities that may be incorporated into an upcoming construction project in the area, including milling and resurfacing projects, or programmed separately through a pushbutton contract.
- **Long-Term Project** – activities that may be incorporated into upcoming construction projects or may need to be programmed for funding as separate projects and need further evaluation.
The following table provides a summary of the type of recommended improvement by older adult living facility. It is worth noting that for some of the safety concerns, a single engineering improvement was not adequate. For instance, some safety concerns presented a pressing need warranting a short-term solution while further evaluation is needed to find a long-term solution.

<table>
<thead>
<tr>
<th>Recommended Improvements</th>
<th>Joe Moretti II and Buena Vista</th>
<th>Hialeah Residence and Vivian Villas</th>
<th>Jasmine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-Term or Maintenance Project</td>
<td>38</td>
<td>19</td>
<td>7</td>
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<tr>
<td>Long-Term Project</td>
<td>12</td>
<td>5</td>
<td>11</td>
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<tr>
<td>Near-Term Project</td>
<td>15</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>65</strong></td>
<td><strong>41</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

This assessment considered operational and safety related issues for all users near the older adult living facilities. This study was commissioned by MDC TPO to develop recommendations to improve the safety of all users throughout the study area.
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Appendix C Field Material and Presentation
Appendix D Community Meeting Sign-in Sheet
## Acronyms

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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADA</td>
<td>Americans with Disabilities Act</td>
</tr>
<tr>
<td>FDOT</td>
<td>Florida Department of Transportation</td>
</tr>
<tr>
<td>MDC</td>
<td>Miami-Dade County</td>
</tr>
<tr>
<td>MDT</td>
<td>Miami-Dade Transit</td>
</tr>
<tr>
<td>MPH</td>
<td>Miles Per Hour</td>
</tr>
<tr>
<td>MUTCD</td>
<td>Manual on Uniform Traffic Control Devices</td>
</tr>
<tr>
<td>RSA</td>
<td>Road Safety Audit</td>
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<td>TPO</td>
<td>Transportation Planning Organization</td>
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Study Area Characteristics

Field Review Dates:
May 15-16, 2019

Participants:
Kevin Walford – Miami-Dade Transportation Planning Organization
Jacques Defrant – Florida Department of Transportation, District 6
Ryan Raghunandan – Florida Department of Transportation, District 6
Irene Soria Cordero – Miami-Dade County Dade Transportation & Public Works
Juan Gutierrez – Live Healthy Little Havana
Rosalba Colmenares – Live Healthy Little Havana
Alejandro Diaz – Live Healthy Little Havana
Phillip Haas – Kittelson & Associates, Inc.

Project Characteristics:
Field Review Type: All Users (Vehicular, Pedestrian, Bicycle, Transit) with a focus on Senior Residents
Adjacent Land Use: Urban; Commercial, Residential, Institutional
Typical Posted Speed Limit: 30 MPH
Roadway Classifications: Urban Principal Arterial, Urban Major Collector, Urban Local
One-way road segments along:
- SW 4th Street;
- SW 6th Street;
- SW 7th Street;
- SW 8th Street;
- SW 4th Avenue;
- SW 5th Avenue;
- SW 6th Avenue; and
- SW 7th Avenue.
Terrain: Flat
Field Review Climatic Conditions: Sunny/Partially Cloudy and Heavy Rain

Project Limits:
The Miami-Dade County (MDC) Transportation Planning Organization (TPO) has conducted a series of Road Safety Audits (RSAs) at selected Assisted Living Facilities as a result of the November 2017 Aging Road Users Strategic Safety Plan recommendations. This RSA report documents the safety performance examination results of the existing roadway network in the vicinity of Joe Moretti II and Buena Vista. The project limits include a one-quarter mile radius around Joe Moretti II and Buena Vista assisted living facilities and are shown in Figure 1. Appendix A provides a detailed summary of the historical crash trends experienced within the study boundaries.
Miami-Dade TPO

Figure 1
Study Area

- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes
- Study Area
- Parks
- Education
- Industrial
- Institutional
- Commercial
- Residential
- Office
- Parking
- Vacant

Joe Moretti II

Buena Vista Apartments

La Cadena Supermarket
Miami Lighthouse for the Blind
ADA Merritt K-8 Center and Jr High School
Joe Marti Park
Mater Academy
Little Havana Activity Center
Jose Marti Park
Mater Academy
Buena Vista Apartments

Figure 1
Study Area
Land Use Context:
There is approximately 5.5 miles of roadway within the study area with I-95 running along the east side. The land use within the study area is made up mostly of single family and multi-family residential with the Joe Moretti II and Buena Vista assisted living facilities located on SW 6th Street. There are several educational and institutional land uses scattered throughout the area including Miami Lighthouse for the Blind on SW 8th Avenue, ADA Merritt K-8 Center on SW 4th Street, and Merritt Jr. High School on SW 4th Street. There is a concentration of commercial uses along SW 8th Street (Calle Ocho). Suggested changes to the study area should consider the varying contexts and address all users (e.g., senior residents, vehicles, pedestrians, bicycles, transit users).

Transit:
There are three Miami-Dade Transit (MDT) routes through the study area; routes 8/8A, 207, and 208. These routes run west along SW 7th Street and east along SW 8th Street. Appendix B provides a summary of the transit ridership by route.

Road Safety Audit (RSA) process:
The RSA process involves multi-disciplinary representatives from various stakeholder groups such as traffic operations, roadway design, safety, transportation planning, transit, and law enforcement. An RSA is typically conducted to identify potential safety issues and provide improvement suggestions in a collaborative team environment. The November 2017, MDC TPO Aging Road Users Strategic Safety Plan recommends RSAs to be conducted for the top tier locations. This RSA was commissioned through the FY2019/2020 Unified Planning Work Program to develop short-term maintenance, near-term project, and long-term project suggestions to improve safety for all transportation users. This study is intended to identify engineering, education, and enforcement improvements to be considered by MDCTPO staff and partner agencies (e.g., City of Miami, Miami-Dade County, FDOT, Miami-Dade Transportation & Public Works). Some improvements presented in this report may be implemented in the short-term while other suggested improvements will require further evaluation prior to implementation. Each engineering improvement identified in this study is classified into one of three categories:

- **Short-Term or Maintenance Project** – it is anticipated that issues identified for maintenance may be addressed on a short timeframe and at a relatively low cost.
- **Near-Term Project** – activities that may be incorporated into an upcoming construction project in the area, including milling and resurfacing projects, or programmed separately through a pushbutton contract.
- **Long-Term Project** – activities that may be incorporated into upcoming construction projects or may need to be programmed for funding as separate projects and need further evaluation.

The field review was conducted on Wednesday and Thursday, May 15-16, 2019. On Wednesday, the team met in the afternoon to discuss the study area and crash history. A walking assessment and observations were completed during the PM peak and night field review. On Thursday, the midday peak observations were performed and a meeting with the RSA Team was conducted in the afternoon to discuss suggestions for potential improvements. Appendix C provides a copy of the material shared with the RSA Team in preparation for the field review. Appendix D provides a copy of the sign-in sheets for the community meetings and field visit.

The safety concerns and suggested improvements reflect the consensus of the safety assessment team and not necessarily that of the MDC TPO.
Field Review Findings

**STUDY AREA-WIDE**

This section includes general recommendations throughout the study area. For location-specific recommendations, see the location specific issues in the following sections.

**Issue #1: Vehicular Speed**

**Description of Issue:**
Posted speeds are 30 MPH for the study area. Based on visual observation, speeds appear to routinely exceed 30 MPH on SW 7th Street.

**Suggestions for Improvement:**
- **Near-Term Project** – Identify resources to enforce posted speeds; consider investigating state or federal grants to provide speed enforcement.
- **Long-Term Project** – Conduct study to determine if travel lanes can be narrowed through resurfacing projects to reduce speeds.
Issue #2: Pedestrian Crossings

Description of Issue:
Crosswalk pavement markings on major and minor streets throughout the study area are missing or faded.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Restripe intersection crosswalks where faded.
- Near-Term Project – Add crosswalks at signalized and stop controlled intersection approaches where they are currently missing. These crosswalks are intended to improve pedestrian safety by facilitating pedestrian crossings at designated locations.
Issue #3: Narrow and Partially Obstructed Sidewalks

Description of Issue:
The sidewalks, particularly on local roads, were observed to be narrow and in some circumstances obstructed by utilities, sign poles, and vegetation.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Vegetation adjacent to sidewalks throughout the corridor should be properly maintained; this improvement may require code enforcement on private property.
- Long-Term Project – Recommend further study to determine if alternative sidewalk alignment and/or additional right-of-way is necessary to allow for wider sidewalk where obstructions are present.
Issue #4: Poor Sight Distance at Intersections

Description of Issue:
Due to on street parking and other objects such as structures, walls/fences, and trees, many intersections have sight distance for vehicles. This leads to vehicles pulling into crosswalk areas as shown in the picture above.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Recommend further study to determine if removing sight obstructions and reducing on street parking near intersections to increase sight distance is needed.
Issue #5: Sidewalk Slopes across Driveways

Description of Issue:
Cross slopes of sidewalks across driveways are steep throughout the study area.

Suggestions for Improvement:
- Near-Term/Long-Term Project – Recommend further study to determine if driveway/sidewalk slope issues may be improved by reconstruction or relocation/closure of driveways. If driveways cannot be closed or relocated on private property, it may be necessary to provide an easement or purchase right of way to provide a flat surface sidewalk between driveways and private property.
Issue #6: Improper Truncated Domes

Description of Issue:
Marked crosswalks and truncated dome surfaces do not properly align at some intersections. For example, some crosswalks were observed to direct pedestrians away from the curb ramps while some truncated dome surfaces are oriented at 45-degree angles to crosswalks. These pedestrian features could misdirect a visually impaired pedestrian. It should be noted that blind pedestrians are active within the study area, particularly near Miami Lighthouse for the Blind (601 SW 8th Avenue).

Suggestions for Improvement:
- Short-Term or Maintenance Project – Replace deteriorated or misaligned truncated dome surfaces. Specific locations are discussed later in the report.
- Near-Term/Long-Term Project – Align crosswalks and curb ramps/truncated domes for future construction projects.
Issue #7: Sign Visibility

Description of Issue:
The pedestrian warning signs throughout the study area have inconsistent color of sign sheeting. Some have traditional engineering grade reflective yellow sheeting while others have high intensity fluorescent yellow-green sign sheeting. The latter are more visible to the road users and are the standard for warning signs associated with schools according to the MUTCD Section 2C.03.

Suggestions for Improvement:
- Near-Term Project –
  Replace traditional engineering grade reflective yellow pedestrian warning signs with high intensity fluorescent yellow-green sign sheeting for conspicuity and consistency in the area.
Issue #8: Bicycle Facilities

Description of Issue:
Sharrows are provided along SW 6th Street and SW 8th Avenue within the study area. Bicycles were observed making unsafe maneuvers, such as riding the wrong direction and riding on the sidewalk against traffic. Bicyclists were generally not observed riding in the roadway using sharrows.

Suggestions for Improvement:
• Near-Term or Maintenance Project –
  Conduct an educational campaign on bicycle safety and best practices on sharing the road. Consider adding signage for stop-controlled approaches at unsignalized intersections to alert drivers to look both ways for bicyclists.

• Long-Term Project –
  Conduct a study to evaluate the feasibility of lane repurposing (reducing the number of through lanes) to provide bike lanes.
Issue #9: Roadway Lighting

Description of Issue:
Lighting levels were inconsistent throughout the study area and low along some corridors and intersections. Large overhanging trees adjacent to the roadway partially block the roadway lighting, resulting in dark spots.

Suggestions for Improvement:
- Near-Term or Maintenance Project – Conduct maintenance work on the existing landscape and prevent lighting poles being blocked by tree branches.
- Long-Term Project – Lighting assessment studies are needed throughout the study area. Lighting alternatives with lower level light poles or pedestrian level lighting should be considered. When modifying intersections, upgrade lighting at intersections to match current FDOT intersection lighting standards.
Issue #10: Roadway Signs Blocked

Description of Issue:
Some roadway signs were blocked by vegetation in the study area. This prevents the driver from reading regulatory, directional and warning information.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Conduct vegetation maintenance throughout the area.
Issue #11: Nighttime Issues

Description of Issue:

Lighting Issues –

• 8th Avenue north of 6th Street overhead streetlight is out
• 6th Avenue between 6th Street and 7th Street has no lighting
• 6th Avenue and 9th Street intersection has no lighting
• 5th Avenue between 6th Street and 7th Street has no lighting
• 4th Avenue and 5th Street southbound has no lighting
• 5th Avenue and 5th Street poor lighting at intersection

Signage Issues –

• 6th Avenue and 6th Street southbound stop sign is not retroreflective
• 7th Avenue school signs are not retroreflective
• 3rd Avenue at 7th Street northbound no right turn sign is not retroreflective

Suggestions for Improvement:

• Short-Term or Maintenance Project –
  Conduct maintenance efforts to replace burnt out lights and replace signs that are damaged or have poor retroreflectivity.
• Long-Term Project –
  Install lighting where lighting is currently missing.
SPECIFIC LOCATION ISSUES
The following section will include recommendations at specific locations throughout the study area.

Location: **SW 7TH STREET AND SW 4TH AVENUE INTERSECTION**

**Issue #12: Worn/Faded No-Right Turn Sign**

![Image of SW 7th Street and SW 4th Avenue Intersection]

**Description of Issue:**
The No Right Turn sign is faded, it is no longer retroreflective and is blocked by bus stop shelter on the westbound approach. When the RSA Team drove by this intersection at night, the sign was not visible.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Replace the No Right Turn sign. The post-mounted sign should be relocated to increase visibility.
Location: **SW 4th Avenue and SW 7th Street Intersection**

**Issue #13: Obstructed Sidewalk**

**Description of Issue:**
The sidewalk on the southbound approach to SW 4th Avenue and SW 7th Street is obstructed.

**Suggestions for Improvement:**
- **Long-Term Project** – Conduct further study to determine if alternative sidewalk alignment is available and/or additional right-of-way is necessary to allow for a wider sidewalk.
Issue #14: Obstructed Sidewalk

Description of Issue:
The sidewalk on the west side of SW 4th Avenue is obstructed by overgrown vegetation. In addition, a concrete pole on the west side of SW 4th Avenue on the south leg is also obstructing the sidewalk.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Vegetation adjacent to the sidewalk should be properly maintained; may require code enforcement on private property.
- Long-Term Project – Conduct a study to determine if relocating the utility pole would be feasible and/or if widening the sidewalk is possible. Additional right-of-way may be required.
### Location: SW 4th Avenue and SW 6th Street Intersection

**Issue #15: Utility Hole in Sidewalk**

![Image of a utility hole in the sidewalk]

**Description of Issue:**
There is an uncovered utility access hole in the sidewalk on the southwest corner of the intersection.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Consider covering the utility hole.
Location: **SW 4**<sup>th</sup> **AVENUE AND SW 5**<sup>th</sup> **STREET INTERSECTION**

**Issue #16: Obstructed Sidewalk**

![Image of obstructed sidewalk](image)

**Description of Issue:**
The sidewalk is obstructed by overgrown vegetation and a School Zone speed limit sign.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Relocate the sign to an area where it would not impede pedestrian traffic.
Location: **SW 7th Street and SW 5th Avenue Intersection**

**Issue #17: Damaged Sidewalk**

**Description of Issue:**
The north side sidewalk of SW 7th Street on the east leg of the intersection is damaged and affects the connecting walkway to the multi-family residences in the area. The damaged sidewalk is located near 437 SW 7th Street.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Repair the sidewalk.
Location: **SW 7th Street and SW 5th Avenue Intersection**

**Issue #18: North/South Pedestrian Crossings on SW 7th Street from SW 4th Avenue to SW 8th Avenue**

![Pedestrians crossing SW 7th Street](image1)

**Description of Issue:**
Pedestrians were observed crossing SW 7th Street, particularly near transit stops. There are no marked north/south pedestrian crossings across SW 7th Street between SW 4th Avenue and SW 8th Avenue.

**Suggestions for Improvement:**
- **Long-Term Project** –
  Conduct a study to evaluate the need for a designated mid-block pedestrian crossing within the study area.
Location: SW 7th Street and SW 6th Avenue Intersection

Issue #19: Regulatory signs for one-way street streets

Description of Issue:
It was observed that a limited number of regulatory signs were provided at the unsignalized intersection of SW 7th Street and SW 6th Avenue to alert drivers of one-way roadway conditions. SW 7th Street is a one-way roadway with westbound traffic and SW 6th Avenue is a one-way roadway with southbound traffic. SW 7th Street is a high volume and higher speed roadway based on field observations. There are no signs on SW 7th Street to indicate SW 6th Avenue is a one-way street. In addition, the No Left Turn sign facing southbound traffic on SW 6th Avenue is covered by the Stop sign on the northeast corner of the intersection.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Install One-Way signs (R6-1) on the near right and the far-left corners of the intersection facing westbound traffic on SW 7th Street according to the MUTCD Section 2B.40.07.
  Relocate No Left Turn sign (R3-2) facing southbound traffic on SW 6th Avenue to be visible to drivers.
Location: **SW 9th Street and SW 5th Avenue Intersection**

**Issue #20: Damaged Sign**

Description of Issue:
Stop sign on the southwest corner of the intersection has been hit and is bent in the direction away from oncoming motorists on SW 9th Street.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Replace sign pole.
Location: SW 8TH STREET AND SW 7TH AVENUE INTERSECTION

Issue #21: Regulatory signs for one-way street streets

Description of Issue:
It was observed that a limited number of regulatory signs were provided at the unsignalized intersection SW 7th Avenue and SW 8th Street to alert drivers of one-way roadway conditions. SW 8th Street is a one-way roadway with eastbound traffic.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Install One-Way signs (R6-1) on the near right and the far-left corners of the intersection facing westbound traffic on SW 7th Street according to the MUTCD Section 2B.40.07. Install No Left Turn sign (R3-2) at the far left-hand corner of the intersection or in conjunction with the Stop sign located on the near right-hand corner according to MUTCD Section 2B.18.04.
Location: **SW 6th Street and SW 7th Avenue Intersection**

**Issue #22: Regulatory signs for one-way streets**

**Description of Issue:**
It was observed that a limited number of regulatory signs were provided at the unsignalized intersection of SW 6th Street and SW 7th Avenue to alert drivers of one-way roadway conditions. SW 6th Street is a one-way roadway with westbound traffic and SW 7th Avenue is a one-way roadway with northbound traffic.

**Suggestions for Improvement:**
- **Short-Term or Maintenance Project**—Install No Right Turn sign (R3-1) facing northbound traffic on SW 7th Avenue in conjunction with the Stop sign located on the near right-hand corner according to MUTCD Section 2B.18.03. Install One-Way signs (R6-1) on the far-left corner of the intersection facing northbound traffic on SW 7th Avenue according to the MUTCD Section 2B.40.07. The existing sign on the far-left corner or northwest corner of the intersection is facing the wrong way or southbound traffic.
Location: SW 4th Avenue and SW 8th Street Intersection

Issue #23: Traffic Conflict

Description of Issue:
The north leg lane configuration at SW 4th Avenue and SW 8th Street includes three exclusive left-turn lanes and a single through lane. Some southbound drivers on the exclusive left-turn lanes driving on this intersection leg (from the I-95 southbound off-ramp) were observed to forcefully merge with the southbound through traffic. About half of the receiving area on the south leg of the intersection has chevron pavement markings restricting southbound vehicle travel path. Southbound traffic in the exclusive left-turn lane adjacent to the through lane was observed continuing southbound through the intersection and traversing through the chevron pavement markings.

Suggestions for Improvement:
- Near-Term Project—
  Conduct a study to evaluate the need to change the existing lane configuration on the north leg and the need for the chevron pavement markings on the south leg. An alternative lane configuration could include changing one of the exclusive left-turn lanes to a shared through/left.
Location: **SW 4th Avenue and I-95 Southbound On-Ramp**

**Issue #24: Roadway Improvement**

![Image of SW 4th Avenue and I-95 Southbound On-Ramp]

**Description of Issue:**
The painted gore chevron markings and lane markings do not extend beyond the physical gore by the I-95 on-ramp just south of SW 4th Avenue.

**Suggestions for Improvement:**
- Near-Term Project – Extend chevron pavement markings to SW 9th Street.
Location: SW 4th Avenue South of SW 8th Street

Issue #25: Pedestrian Facility

Description of Issue:
The sidewalk is cracked and depressed utility lids are present.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Repair the sidewalk and replace the utility lids.
Location: SW 8th Avenue Between SW 4th Street and SW 5th Street

Issue #26: Curb Ramp

Description of Issue:
There is a curb ramp on the west side of SW 8th Avenue, south of SW 4th Street that does not lead to a crosswalk.

Suggestions for Improvement:
- Near-Term Project –
  Remove curb ramp or conduct study to determine if crossing should be installed.
Location: **SW 8th Avenue Between SW 5th Street and SW 6th Street**

**Issue #27: Obstructed Sidewalk**

![Image of the sidewalk](image)

**Description of Issue:**
The west side sidewalk on SW 8th Avenue between SW 5th Street and 6th Street is obstructed by a utility pole and warning sign pole with flashing beacons.

**Suggestions for Improvement:**
- **Long-Term Project** – Conduct a study to determine if alternative sidewalk alignment and/or additional right-of-way is necessary to allow for wider sidewalk or if sign pole can be relocated.
Location: **SW 8th Avenue Between SW 7th Street and SW 8th Street**

**Issue #28: Curb Ramp**

![Image of curb ramp]

**Description of Issue:**
There is a curb ramp on the east side of SW 8th Avenue, south of SW 7th Street that does not lead to a crosswalk.

**Suggestions for Improvement:**
- **Near-Term Project** –
  - Remove curb ramp or conduct study to determine if the crossing should be installed.
Issue #29: Hole in Sidewalk

Description of Issue:
There is an exposed sign pole hole in ground on the southwest corner of the intersection.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Coordinate with the maintenance agency to determine if a sign is missing. Otherwise, consider filling if the hole in the sidewalk.
Location: SW 8th Avenue and SW 5th Street Intersection

Issue #30: Sidewalk Access

Description of Issue:
The sidewalk on the southeast corner of the intersection is obstructed by overgrown vegetation and a utility pole.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Vegetation adjacent to the sidewalk should be properly maintained; may require code enforcement on private property.
- Long-Term Project –
  Conduct a study to determine if alternative sidewalk alignment and/or additional right-of-way is necessary to allow for wider sidewalk.
Issue #31: Pedestrian Crossing

**Description of Issue:**
Faded crosswalk striping on the west leg of the intersection. The intersection is missing a truncated dome surface on the northwest corner of the intersection – north/south crosswalk.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Restripe crosswalk and install truncated dome surface to the northwest corner.
Location: SW 5th Avenue and SW 5th Street Intersection

Issue #32: Sloped Sidewalk

Description of Issue:
The cross slope of the sidewalks across the driveway is steep. Shown in the picture above is the north side of SW 5th Avenue just east on SW 5th Street as an example of the issue in the area.

Suggestions for Improvement:
- Near-Term/Long-Term Project – Conduct a study to determine if driveway/sidewalk slope issues may be improved by reconstruction or relocation of the driveway. If driveways cannot be relocated on private property, it may be necessary to provide an easement or purchase right of way to provide a flat surface sidewalk between driveways and private property.
Location: SW 7th Avenue and SW 5th Street Intersection

Issue #33: One-Way Sign

Description of Issue:
It was observed that a limited number of regulatory signs were provided at the unsignalized intersection SW 7th Avenue and SW 5th Street to alert drivers of one-way roadway conditions. SW 7th Avenue is a one-way roadway with northbound traffic.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Install One-Way sign (R6-1) on the near right corner of the intersection facing eastbound traffic on SW 7th Street according to the MUTCD Section 2B.40.07.
  Install No Left Turn sign (R3-2) at the far left-hand corner of the intersection or in conjunction with the Stop sign located on the near right-hand corner according to MUTCD Section 2B.18.04.
Location: **SW 6th Court and SW 6th Street**

**Issue #34: Obstructed Sidewalk**

![Image of sidewalk with vegetation]

**Description of Issue:**
The sidewalk is obstructed by overgrown vegetation (thorny bougainvillea) on the south side of SW 6th Street.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Vegetation adjacent to the sidewalk on the south side of SW 6th Street should be properly maintained; may require code enforcement on private property.
### Location: SW 3RD AVENUE AND SW 7TH STREET INTERSECTION

**Issue #35: Pedestrian Crossing Signal**

![Image of the pedestrian crossing signal](image)

**Description of Issue:**
The figure displayed on the pedestrian signal on the northwest corner of the intersection facing east is not visible.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Replace the pedestrian signal head for proper display.
Issue #36: Speed Limit Sign

Description of Issue:
A school speed limit sign facing northbound traffic on the east side of SW 4th Avenue between SW 4th Street and SW 5th Street is blocked by vegetation. The school speed limit sign poles block the sidewalk.
In addition, the Advance Stop Sign Warning sign facing northbound traffic on the east side of SW 4th Avenue between SW 4th Street and SW 5th Street (downstream of school speed limit sign) is covered by vegetation.

Suggestions for Improvement:
• Short-Term or Maintenance Project –
  Relocate the school speed limit sign out of the sidewalk path.
  Conduct maintenance activity to the vegetation and landscape along SW 4th Avenue to prevent signs from getting blocked.
Location: **SW 5th Avenue Between SW 7th Street and SW 8th Street**

**Issue #37: Sidewalk Obstruction**

![Image of the sidewalk obstruction](image)

**Description of Issue:**
The sidewalk on the east side of SW 5th Avenue between SW 7th Street and SW 8th Street is obstructed by overgrown vegetation. In addition, the fence was observed to encroach onto the sidewalk.

**Suggestions for Improvement:**
- **Short-Term or Maintenance Project** – Conduct maintenance on the vegetation and consider conducting coordination with private owner to fix the fence encroaching onto the sidewalk.
Location: SW 6th Avenue and SW 6th Street Intersection

Issue #38: Stop Sign Covered by Vegetation

Description of Issue:
Additional regulatory signs should be provided at the unsignalized intersection of SW 6th Avenue and SW 6th Street to alert drivers of one-way roadway conditions. SW 6th Avenue is a one-way roadway with southbound traffic and SW 6th Street is a one-way roadway with westbound traffic.

In addition, the Stop sign on the northeast corner of the intersection, facing southbound traffic on SW 6th Avenue, is blocked by vegetation.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Install a One-Way sign (R6-1) on the far-left corner of the intersection facing southbound traffic on SW 6th Avenue according to the MUTCD Section 2B.40.07.

Conduct maintenance to trip vegetation on the northeast corner of the intersection.
Location: SW 4TH AVENUE AND SW 4TH STREET INTERSECTION

Issue #39: Pedestrian Crossing

Description of Issue:
Marked crosswalks are missing on all intersection approaches.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Install marked crosswalks on all the intersection approaches.
Location: SW 6th Avenue and SW 3rd Street Intersection

Issue #40: Pedestrian Crossing

Description of Issue:
Eastbound intersection approach (west leg) has been repaved over the stop bar and crosswalk.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Restripe crosswalk and stop bar.
Location: **SW 5th Avenue Between SW 8th Street and SW 9th Street**

**Issue #41: Sidewalk Obstruction**

**Description of Issue:**
Store items are blocking the sidewalk on the east side of SW 5th Avenue.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project –
  Coordinate with the shop owner to remove items from the sidewalk.
Location: SW 5th Avenue and SW 8th Street Intersection

Issue #42: Pedestrian Signal Heads

Description of Issue:
The signals on the pedestrian signal heads on the southeast and southwest corners of the intersection are not visible.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Conduct maintenance for malfunctioning pedestrian signal heads or replace them.
Location: **SW 8th Avenue and SW 6th Street Intersection**

**Issue #43: Pedestrian Crossing**

![Image of pedestrian crossing](image1.png)  
![Image of pedestrian crossing](image2.png)

**Description of Issue:**
The pedestrian truncated dome surfaces at the ramps are not properly installed.

**Suggestions for Improvement:**
- **Near-Term Project** –  
  Reinstall or replace the truncated dome surfaces to properly guide pedestrians to the crosswalks.
Location: **SW 8th Avenue and SW 5th Street Intersection**

**Issue #44: Pedestrian Crossing**

**Description of Issue:**
The Do Not Enter sign on the west leg of the intersection is vandalized with graffiti. In addition, the No Right Turn on the southeast corner, facing SW 8th Avenue southbound traffic, is blocked by vegetation. There are no marked east-west pedestrian crossings along SW 8th Avenue between SW 4th Street and SW 6th Street.

**Suggestions for Improvement:**
- **Short-Term or Maintenance Project** – Replace the Do Not Enter sign. Conduct maintenance to trim outgrown vegetation.
- **Long-Term Project** – Conduct a study to evaluate the need for an east-west crosswalk along SW 8th Avenue.
Location: **SW 8th Avenue and SW 4th Street Intersection**

**Issue #45: Pedestrian Crossing**

**Description of Issue:**
The mid-block crossing is located approximately 70 feet north of the intersection. When the pedestrian signal is activated, vehicles traveling northbound stop and block the SW 8th Avenue and SW 4th Street intersection.

**Suggestions for Improvement:**
- **Long-Term Project** –
  Conduct a study to determine if east/west crosswalk can be relocated.
Location: **SW 4th Avenue and SW 4th Street Intersection**

Issue #46: Pedestrian Crossing

![Image of pedestrian crossing](image)

**Description of Issue:**
Crosswalk marking is missing at the intersection.

**Suggestions for Improvement:**
- **Short-Term or Maintenance Project –**
  Install missing crosswalks.
Issue #47: Pedestrian Access

Description of Issue:
Due to the adjacent driveways on the sidewalk, a majority of the sidewalk on both sides of SW 4th Street is sloped. This roadway feature creates potential issues for wheelchairs to use the sidewalk in addition to potential conflicts with parked vehicles.

Suggestions for Improvement:
- Near-Term Project – Conduct a study to determine if the sidewalk should be leveled.
Location: SW 5th Avenue and SW 4th Street Intersection

Issue #48: Pedestrian Crossing

Description of Issue:
The crosswalk markings are missing on the controlled approaches (east and west legs). In addition, there is poor sight distance due to the fence and parked vehicles near the intersection.

Suggestions for Improvement:
- **Short-Term or Maintenance Project** – Install marked crosswalks on controlled approaches.
- **Near-Term Project** – Conduct a study to determine if intersection should be converted to an all-way stop. In addition, conduct a sight distance study to improve visibility at intersection.
Location: SW 7th Avenue and SW 5th Street Intersection

Issue #49: Pedestrian Crossing

Description of Issue:
The crosswalk markings are missing along SW 5th Street.

Suggestions for Improvement:
- Near-Term Project –
  Install marked crosswalks on controlled approaches along SW 5th Street.
Description of Issue:
Miami Lighthouse for the Blind is located on the SW corner of the intersection with access points on the south and west legs. Marked pedestrian crossings along SW 6th Street between SW 8th Avenue and SW 4th Avenue are faded or missing. Signage on north sidewalk is blocked by landscape.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Add pedestrian crossings on the north and south side. Conduct maintenance on landscape blocking signs.
Location: SW 7th Avenue and SW 3rd Street Intersection

Issue #51: Drainage

Description of Issue:
The inlet on the northwest corner of the intersection is partially clogged with debris. The curb ramp is inaccessible when it rains.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Conduct maintenance work to remove debris.
- Near-Term Project – Evaluate if the inlet / drainage system needs modifications.
Location: **SW 8th Street On-Ramp to I-95 Northbound**

**Issue #52: Pedestrian Crossing**

![Image of a street scene with traffic and a crosswalk]

**Description of Issue:**
Traffic headed to the I-95 ramp traffic on SW 8th Street was observed not yielding to pedestrians on crosswalk.

**Suggestions for Improvement:**
- **Short-Term or Maintenance Project** –
  Install diamond shaped Yield line markings per MUTCD section 3B.16 in conjunction with Yield Here To Pedestrians (R1-5 series) signs (see Section 2B.11).
### Location: SW 8th Street and SW 5th Avenue Intersection

**Issue #53: Traffic Signal Heads**

![Intersection Image]

**Description of Issue:**
The signal heads are not located over the center of the roadway. A motorist in the left-most eastbound lane could have difficulty seeing the signal indications if a large truck or sightseeing bus were in the center lane.

**Suggestions for Improvement:**
- Near-Term Project – Reposition the signal heads to the center of the travel lanes.
Location: SW 8TH STREET AND SW 5TH AVENUE INTERSECTION

Issue #54: One-Way Signs

Description of Issue:
One-way signs are missing at the intersection.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Install One-Way signs (R6-1) on the near right and the far-left corners of the intersection according to the MUTCD Section 2B.40.07.
Location: SW 8th STREET

Issue #55: Sidewalk User Sign

Description of Issue:
The RSA Team observed a single sign, located on the southside of SW 8th Street just east of SW 7th Avenue, which prohibits bicycles, scooters, skates, skateboards, mopeds and other vehicles from using the sidewalk on SW 8th Street from SW 4th Avenue to Tamiami Canal Road (Palmetto Expressway). The sign references City ordinance 8-6. Bicyclists were observed using the sidewalk. Signing to regulate use of a facility should be easy to read.

Suggestions for Improvement:
• Near-Term Project – Recommend further study to determine if the regulation is enforced and remove or provide additional signs that are easy to read along the corridor.
Location: SW 7th Street and SW 8th Avenue Intersection

Issue #56: Sign Visibility

Description of Issue:
The nearside One-Way regulatory sign is located 30 feet from the northbound approach making it difficult for an approaching driver to see the sign.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Relocate the sign closer to the intersection to be within driver’s sight.
Location: SW 4th Avenue and SW 8th Street Intersection

Issue #57: Sign Visibility

Description of Issue:
There are no One-Way arrow signs installed at the intersection for eastbound traffic. Also, the No Left Turn sign mounted on the traffic signal mast arm has degraded and is hard to see.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Install One-Way signs (R6-1) on the near right and the far-left corners of the intersection facing eastbound traffic on SW 8th Street according to the MUTCD Section 2B.40.07.
  Replace No Left Turn sign (R3-2) facing eastbound traffic on SW 8th Street.
Location: SW 4TH STREET NEAR SW 4TH AVENUE

Issue #58: Curb Bulb-Out

Description of Issue:
A curb bulb-out to control parking has been struck numerous times. The bulb-out is hard to see in the dark.

Suggestions for Improvement:
- Near-Term Project – Consider removing the stump. Reconstruct bulb-out to increase its visibility with pavement markings.
Summary of Suggestions

This assessment considers operational and safety related issues for all users near Joe Moretti II and Buena Vista assisted living facilities. This study was commissioned by MDC TPO to develop recommendations to improve the safety of all users throughout the study area. The suggestions identified in this report are summarized as follows:

Improvements:
Each suggestion identified in this study is classified into one of three categories:

- Short-Term or Maintenance Project – it is anticipated that issues identified for maintenance may be addressed by public agency staff on a short timeframe and at a relatively low cost.
- Near-Term Project – activities that may be incorporated into an upcoming construction project in the area, including milling and resurfacing projects, or programmed separately through a pushbutton design-build contract.
- Long-Term Project – activities that may be incorporated into upcoming construction projects or may need to be programmed for funding as separate projects.

Education:
Potential corridor-focused education efforts are noted below:

- Educate Bicyclists: Warn bicyclists of the risks associated with riding on the sidewalk against the flow of traffic
- Educate Bicyclists: Educate bicyclists regarding best practices for nighttime riding and provide resources (e.g., bike lights, reflectors, wear bright or retroreflective clothing)
- Educate Motorists: Yield to pedestrians in crosswalks
- Educate Motorists: Watch for pedestrians and bicyclists at driveways (look both ways)
- Educate Pedestrians: Use of designated crosswalks and use of pedestrian signals
- Educate Pedestrians: Educate pedestrians regarding being visible at night

Enforcement:
Potential corridor-focused enforcement efforts are noted below:

- Motorists: Consider investigating state or federal grants to increase speed enforcement in areas with high volumes of transit users, pedestrians, and bicycles.

The issues and suggested improvements reflect the consensus of the safety assessment team and not necessarily that of the MDC TPO.

The following table lists each issue identified within the study area as well as its categorized improvement type.
### SUMMARY OF RECOMMENDATIONS

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<td>SW 8th Street On-Ramp to I-95 Northbound</td>
<td>Pedestrian Crossing</td>
<td>Short-Term or Maintenance Project</td>
</tr>
<tr>
<td>53</td>
<td>SW 8th Street and SW 5th Avenue Intersection</td>
<td>Traffic Signal Heads</td>
<td>Near-Term Project</td>
</tr>
<tr>
<td>Issue Number</td>
<td>Issue Location</td>
<td>Issue Type</td>
<td>Improvement Type</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------</td>
<td>----------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>54</td>
<td>SW 8th Street and SW 5th Avenue Intersection</td>
<td>One-Way Signs</td>
<td>Short-Term or Maintenance Project</td>
</tr>
<tr>
<td>55</td>
<td>SW 8th Street</td>
<td>Sidewalk User Sign</td>
<td>Near-Term Project</td>
</tr>
<tr>
<td>56</td>
<td>SW 7th Street and SW 8th Avenue Intersection</td>
<td>Sign Visibility</td>
<td>Short-Term or Maintenance Project</td>
</tr>
<tr>
<td>57</td>
<td>SW 4th Avenue and SW 8th Street Intersection</td>
<td>Sign Visibility</td>
<td>Short-Term or Maintenance Project</td>
</tr>
<tr>
<td>58</td>
<td>SW 4th Street near SW 4th Avenue</td>
<td>Curb Bulb-Out</td>
<td>Near-Term Project</td>
</tr>
</tbody>
</table>
Appendix A
Historical Crash Summary
Senior Living Facilities
Road Safety Audit

Joe Moretti II and Buena Vista Apartments

City of Miami

Background

The Senior Living Facilities Road Safety Audit focused on the areas surrounding Joe Moretti II Apartments and Buena Vista Apartments includes several corridors as follows that were identified as focus areas based on their crash history:

- SW 7th St from US 441 to SW 3rd Ave
- SW 8th St from west of SW 7th Ave to I-95 NB entry ramps
- US 441 from SW 7th St to SW 4th St
- SW 6th Ave from SW 9th St to SW 2nd St
- SW 5th Ave from SW 9th St to SW 2nd St
- SW 4th Ave from SW 9th St to north of SW 3rd St

The general segment characteristics for the area reviewed below:

- Posted speed limits of 30 mph, with roadways through residential areas generally unsigned:
- A mix of one-way and two-way operations, with mostly two lanes (three lanes on SW 7th St and SW 8th St).
- There are no marked bicycle lanes. Sharrows are present on some roadways.
- There are continuous sidewalks on both sides of the roadways throughout the study area.
- Overhead street lighting is present at some intersections and sporadic along segments.
- Curb and gutter is present the study area.
- The land use is primarily residential with a few parks and schools throughout the area and commercial uses centered along the SW 8th St corridor.
- This area is served by bus routes 8 and 207 along SW 6th St, SW 7th St and route 208 along SW 8th St.
- There are seven (7) signalized intersections throughout the study area:
  - US 441 at SW 6th St
    - Standard crosswalk markings
    - All crosswalks include pedestrian actuated signals with push buttons
  - US 441 at SW 7th St
    - Standard crosswalk markings
    - All crosswalks include pedestrian actuated signals with push buttons
  - SW 5th Ave at SW 8th St
    - Special emphasis crosswalk markings
    - All crosswalks include pedestrian actuated signals with push buttons
  - SW 4th Ave at SW 8th St
    - Standard crosswalk markings (no east leg crosswalk, south leg crosswalk and SE corner sidewalk are new)
- All crosswalks include pedestrian actuated signals with push buttons
  - SW 4th Ave at SW 7th St
    - Standard crosswalk markings (no south leg crosswalk)
    - All crosswalks include pedestrian actuated signals with push buttons
  - SW 4th Ave at SW 6th St
    - Standard crosswalk markings
    - All crosswalks include pedestrian actuated signals with push buttons
  - SW 3rd Ave at SW 7th St
    - Standard crosswalk markings
    - All crosswalks include pedestrian actuated signals with push buttons

**Crash History (2014 – 2018):**

Five (5) years of available vehicular crash data, 2014 to 2018, was obtained from the Signal Four Analytics database and utilized for historical crash analysis.

**Overall Study Area**

A total of 2,480 vehicular crashes were reported over the five-year study period. Of the 2,480 crashes reported during the study period, there were three fatal crashes (0.1 percent), 309 injury crashes (13 percent), and 2,168 property damage only (PDO) crashes (87 percent). There were 15 bicycle involved crashes (0.6 percent) and 28 pedestrian involved crashes (1 percent):

The reported crashes are displayed by different measures of time (year, month, day, and hour) below. Overall, the number of crashes has increased between 2014 and 2017, and decreased from that point in 2018. March (249 crashes) and October (245 crashes) were the highest crash months during the year, while Friday (395 crashes) was the highest crash day of the week. Seventy-four (74) percent of all crashes occurred between 7:00 AM and 7:00 PM.
The reported crashes by crash type are displayed below. Twenty-nine (29) percent (710 crashes) were sideswipe crashes, twenty-four (24) percent (597 crashes) were rear-end crashes, and twenty-four (24) percent (595 crashes) were angle crashes. Twenty-eight (28) percent of crashes occurred under non-daylight conditions.

Among the crashes that occurred during non-daylight conditions, general trends are similar to those presented for all crashes in the study area. Sideswipe, rear-end, and angle crashes remain the predominant crash types, with crashes per year increasing from 2014 through 2018. Non-daylight crashes do occur more heavily on weekends, with the highest crash day being Saturday (140 crashes, 21 percent). High crash locations of the non-daylight crashes are similar to overall high crash locations, with clusters occurring at the signalized intersections on SW 7th St and SW 8th St and along US 441. Eighty-four (84) percent of the non-daylight crashes were PDO crashes, 15 percent were injury crashes, and all three (3) fatal crashes that occurred in the study area occurred in non-daylight conditions (0.4 percent of non-daylight crashes).

A total of 333 crashes in the study area involved elderly users, with 85 percent PDO crashes and 15 percent injury crashes. These crashes primarily occurred between 7am and 7pm (92 percent) and were fairly evenly distributed from Monday to Saturday throughout the week, with the lowest number of crashes occurring on Sunday (27 crashes, 8 percent). The most prevalent crash types included sideswipe (32 percent), angle (28 percent), and rear-end (17 percent).

Further details on crashes located within the six previously identified high-crash corridors in the study area are provided below.
SW 7th St from US 441 to SW 3rd Ave (886 total crashes)
- 1 fatal crash, 14 percent (126 crashes) were injury-related, and 86 percent (759 crashes) were PDO.
- 35 percent (309 crashes) were rear-end, 31 percent (270 crashes) were sideswipe, and 19 percent (164 crashes) were angle.
  - 73 of the 309 rear-end crashes occurred in the westbound direction.
  - 196 of the 309 rear-end crashes occurred in the southbound direction.
- 27 percent (237 crashes) occurred in non-daylight conditions.
- October (93 crashes) was the highest crash month.
- 37 percent (329 crashes) occurred between 3:00 PM and 7:00 PM.
- 6 crashes were pedestrian involved and 2 crashes were bicyclist involved.
- 12 crashes were alcohol or drug related.

SW 8th St from west of SW 7th Ave to I-95 NB entry ramps (1048 total crashes)
- 2 fatal crashes, 10 percent (101 crashes) were injury-related, and 90 percent (945 crashes) were PDO.
- 36 percent (372 crashes) were sideswipe, 23 percent (241 crashes) were angle, and 22 percent (232 crashes) were rear-end.
  - 85 of the 232 rear-end crashes occurred in the eastbound direction.
  - 78 of the 232 rear-end crashes occurred in the southbound direction.
- 31 percent (323 crashes) occurred in non-daylight conditions.
- March (110 crashes) was the highest crash month.
- 29 percent (300 crashes) occurred between 3:00 PM and 7:00 PM.
- 12 crashes were pedestrian involved and 5 crashes were bicyclist involved.
- 5 crashes was alcohol or drug related.
US 441 from SW 7th St to SW 4th St (178 total crashes)

- 19 percent (34 crashes) were injury-related, and 81 percent (144 crashes) were PDO.
- 34 percent (60 crashes) were angle, 24 percent (42 crashes) were rear-end, and 17 percent (30 crashes) were sideswipe.
  - 14 of the 42 rear-end crashes occurred in the westbound direction.
  - 12 of the 42 rear-end crashes occurred in the southbound direction.
  - 10 of the 42 rear-end crashes occurred in the northbound direction.
- 26 percent (47 crashes) occurred in non-daylight conditions.
- September (26 crashes) was the highest crash month.
- 34 percent (61 crashes) occurred between 2:00 PM and 7:00 PM.
- 3 crashes were pedestrian involved and 4 crashes were bicyclist involved.
- 1 crash was alcohol involved.

SW 6th Ave from SW 9th St to SW 2nd St (180 total crashes)

- 1 fatal crash, 12 percent (21 crashes) were injury, and 88 percent (158 crashes) were PDO.
- 36 percent (65 crashes) were angle, 27 percent (49 crashes) were sideswipe, and 10 percent (18 crashes) were rear-end.
  - 6 of the 18 rear-end crashes occurred in the westbound direction.
  - 5 of the 18 rear-end crashes occurred in the eastbound direction.
- 19 percent (35 crashes) occurred in non-daylight conditions.
- October (24 crashes) was the highest crash month.
- 41 percent (74 crashes) occurred between 2:00 PM and 7:00 PM.
- 4 crashes were pedestrian involved and 3 crashes were bicyclist involved.
- 1 crash was alcohol involved.
Joe Moretti II and Buena Vista Apartments Historical Crash Summary

SW 5th Ave from SW 9th St to SW 2nd St (268 total crashes)
- 17 percent (45 crashes) were injury-related, and 83 percent (223 crashes) were PDO.
- 39 percent (104 crashes) were angle, 14 percent (38 crashes) were rear-end, and 14 percent (37 crashes) were sideswipe.
  - 9 of the 38 rear-end crashes occurred in the northbound direction.
  - 18 of the 38 rear-end crashes occurred in the eastbound direction.
- 17 percent (46 crashes) occurred in non-daylight conditions.
- April (30 crashes) was the highest crash month.
- 37 percent (98 crashes) occurred between 3:00 PM and 7:00 PM.
- 3 crashes were pedestrian involved and 3 crashes were bicyclist involved.
- 3 crashes were alcohol or drug involved.

SW 4th Ave from SW 9th St to north of SW 3rd St (888 total crashes)
- 6 percent (49 crashes) were injury-related, and 95 percent (839 crashes) were PDO.
- 44 percent (387 crashes) were sideswipe, 28 percent (250 crashes) were angle, and 17 percent (147 crashes) were rear-end.
  - 66 of the 38 rear-end crashes occurred in the southbound direction.
  - 47 of the 147 rear-end crashes occurred in the eastbound direction.
- 31 percent (276 crashes) occurred in non-daylight conditions.
- April (91 crashes) was the highest crash month.
- 38 percent (341 crashes) occurred between 2:00 PM and 7:00 PM.
- 1 crash was pedestrian involved and 2 crashes were bicyclist involved.
- 4 crashes were alcohol or drug involved.
## CRASH ANALYSIS - Joe Moretti II & Buena Vista Apartments

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<tr>
<th>Type of Crash</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Property Damage Only</th>
<th>Injury</th>
<th>Fatality</th>
<th>Total</th>
<th>Average</th>
<th>Percent</th>
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<td>140</td>
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<td>534</td>
<td>544</td>
<td>518</td>
<td>2168</td>
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### Crash Severity

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<th>PDO</th>
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<th>2018</th>
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<th>Injury</th>
<th>Fatality</th>
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<th>Percent</th>
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<td>461</td>
<td>473</td>
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### Light Conditions

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<th>Injury</th>
<th>Fatality</th>
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<th>Average</th>
<th>Percent</th>
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<td>486</td>
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<td>324</td>
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<td>0</td>
<td>3</td>
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### Month

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<tr>
<th>Month</th>
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<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Property Damage Only</th>
<th>Injury</th>
<th>Fatality</th>
<th>Total</th>
<th>Average</th>
<th>Percent</th>
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<td>January</td>
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### Day of Week

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<th>Day of Week</th>
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<th>2016</th>
<th>2017</th>
<th>2018</th>
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<th>Injury</th>
<th>Fatality</th>
<th>Total</th>
<th>Average</th>
<th>Percent</th>
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<td>Monday</td>
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<td>61</td>
<td>83</td>
<td>83</td>
<td>63</td>
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<td>66</td>
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<td>56</td>
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<td>70</td>
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### Crash Summary 2_3_combined
## Crash Analysis - Joe Moretti II & Buena Vista Apartments

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| Y | 20   | 28   | 35   | 16   | 117   | 13   | 0    | 130  | 26.00 | 5.2%  |
| N | 404  | 432  | 499  | 513  | 502   | 2051 | 296  | 3    | 2359  | 470.00 | 94.8% |
CRASH ANALYSIS - Joe Moretti II & Buena Vista Apartments

**Crashes by Year and Severity**

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<th>Year</th>
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<th>Fatal</th>
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<td></td>
</tr>
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<td>2017</td>
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<td>2018</td>
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**Crashes by Type and Severity**

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<th>Fatality</th>
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<tr>
<td>Right Turn</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sideswipe</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Head On</td>
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<tr>
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<td>Pedestrian</td>
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**Crashes by Month and Severity**

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**Crashes by Lighting Condition and Severity**

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<tr>
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**Crashes by Day of Week and Severity**

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<tr>
<td>Sunday</td>
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**Crashes by Hour of Day and Severity**

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<th>Fatality</th>
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## CRASH ANALYSIS - Joe Moretti II & Buena Vista Apartments (elderly road users)

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<th>2016</th>
<th>2017</th>
<th>2018</th>
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<th>Injury</th>
<th>Fatality</th>
<th>Total</th>
<th>Average</th>
<th>Percent</th>
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### Crash Severity
- **PDO**
  - 44 64 55 73 48

### Light Conditions
- **Daylight**
  - 50 56 55 72 50
- **Dusk**
  - 1 2 0 1 2
- **Dawn**
  - 0 0 0 0 0
- **Dark - Lighted**
  - 4 11 10 9 6
- **Dark - Not Lighted**
  - 0 1 0 0 0
- **Dark - Lighting Unknown**
  - 0 0 0 0 0

### Surface Condition
- **Dry**
  - 50 68 58 76 57
- **Wet**
  - 3 3 8 7 1
- **Other**
  - 0 0 0 0 0

### Month
- **January**
  - 3 7 5 9 4
- **February**
  - 18 5 4
- **March**
  - 7 9
- **April**
  - 4 2
- **May**
  - 2 5
- **June**
  - 4 9 5 9 2
- **July**
  - 5 3 3 2 6
- **August**
  - 8 8 2 9 6
- **September**
  - 2 2 9 5 6
- **October**
  - 7 4 12 9 5
- **November**
  - 3 8 9 6 5
- **December**
  - 5 6 4 9 6

### Day of Week
- **Monday**
  - 9 13 9 14 6
- **Tuesday**
  - 7 11 10 8 6
- **Wednesday**
  - 7 11 10 12
- **Thursday**
  - 5 16 10 10 3
- **Friday**
  - 3 8 12 13 6
- **Saturday**
  - 8 8 12 13 6
- **Sunday**
  - 4 5 5 6 7

### Hour of Day
- **0:00**
  - 2
- **1:00**
  - 0 0 1 0 0
- **2:00**
  - 0 0 0 1 0
- **3:00**
  - 0 0 0 0 0
- **4:00**
  - 0 0 0 1 0
- **5:00**
  - 0 0 0 0 0
- **6:00**
  - 0 0 1 0 0

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Crash Summary 2_3_combined_elderly
# CRASH ANALYSIS - Joe Moretti II & Buena Vista Apartments (elderly road users)

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**CRASH ANALYSIS - Joe Moretti II & Buena Vista Apartments (elderly road users)**

### Crashes by Year and Severity

- **PDO**: Property Damage Only
- **Injury**: Injury
- **Fatal**: Fatality

### Crashes by Type and Severity

- **PDO**: Property Damage Only
- **Injury**: Injury
- **Fatal**: Fatality

### Crashes by Month and Severity

- **PDO**: Property Damage Only
- **Injury**: Injury
- **Fatal**: Fatality

### Crashes by Lighting Condition and Severity

- **PDO**: Property Damage Only
- **Injury**: Injury
- **Fatal**: Fatality

### Crashes by Day of Week and Severity

- **PDO**: Property Damage Only
- **Injury**: Injury
- **Fatal**: Fatality

### Crashes by Hour of Day and Severity

- **PDO**: Property Damage Only
- **Injury**: Injury
- **Fatal**: Fatality
Figure 3
Bicycle & Pedestrian Crashes

Data Source: Signal 4 Analytics (2014-2018)
Miami-Dade TPO

Figure 4
Nighttime Crashes

Legend:
- Nighttime Crashes
- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes
- Study Area

Study Area

Bus Routes

Bus Stops

Warning

School

Traffic Signal

School

Nighttime Crashes

Data Source: Signal 4 Analytics (2014-2018)
Figure 5
Fatal & Severe Injury Crashes

- Fatal Crashes
- Severe Injury Crashes
- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes
- Study Area

Data Source: Signal 4 Analytics (2014-2018)
Figure 6
Crashes with Elderly Road Users

- Elderly Crashes
- Pedestrian Involved Crashes
- Bicycle Involved Crashes
- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes

Study Area
Appendix B
Transit Ridership
### Transit Ridership Data by Route and Stops (all)

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Appendix C
Field Material and Presentation
Community Meeting

Joe Moretti II Apartments & Buena Vista Apartments

COMMUNITY FEEDBACK FOR ROAD SAFETY

When: Wednesday, May 15th @ 2:30 PM
Where: Joe Moretti I Apts. – Community Center
240 SW 9th Street Miami, FL 33130

We want YOUR input to improve road safety. We are looking to document any potential road issues you have encountered walking, driving, or bicycling and recommend improvements.
Schedule

Kick-Off Meeting (2:00 – 2:30 PM)

• Purpose of Field Visit
  o Day 1 PM Field Visit – Corridors with High Crash Frequency
  o Day 1 Nighttime Field Visit – Sign retroreflectivity and pavement markings conditions – Driving only
  o Day 2 Midday Field Visit – Corridors not covered in PM Field Visit

• Assign RSA responsibilities

Community Meeting (2:30 – 3:30 AM)
PM Peak Field Visit (3:30 – 5:30 PM)
Nighttime Field Visit (8:30 – 9:30 PM) – Driving
Joe Moretti II/Buena Vista Apartments

Project Location Identification

What is the issue?

- Over 10% of all crashes in Miami-Dade County between 2008-2014 occurred within ¼ mile of elderly living centers

How was this location selected?

- Over 140 older adult residential living centers were reviewed
- ¼ mile radius used as the study area for each living center
- Living centers were ranked by the following criteria:
  - Total number of crashes from 2012-2014
  - Number of crashes involving 65 and older road users

Source: Aging Road Users Strategic Safety Plan, November 2017

Field Review Responsibilities

- For the Day 1 (3:30-5:30 PM) and Day 2 (9-11 AM) Walking Field Visit:
  - Evaluate all roadway and roadside features, design elements and local conditions (glare, night visibility, adjacent land uses) that would increase the likelihood and severity of a crash
  - Observe how road users are interacting with the road facility
  - Determine if the needs of all road users have been adequately and safely met
  - Observe physical evidence of past crashes and off-road excursions
  - Record flashing don’t walk timings for crosswalks
  - Recording yellow/all-red clearance intervals for each vehicular movement

- For the Day 1 Nighttime (8:30-9:30 PM) Field Visit
  - Drive the study area
  - Observe lighting, retroreflectivity of signs, and pavement marking conditions
Field Review Responsibilities

- Wear your safety vest!
- Everyone should take as many notes and pictures as they can!
- For PM/Nighttime (Day 1) and Midday (Day 2) review
  - Divide into two teams:
    - Team A will observe:
      - SW 8th Ave from SW 4th St to SW 7th St
      - SW 8th St from SW 8th Ave to SW 3rd Ave
      - SW 4th Ave from SW 9th St to SW 7th St
    - Team B will observe:
      - SW 4th Ave from SW 2nd St to SW 7th St
      - SW 7th St from SW 3rd Ave to SW 8th Ave

Team Field Assignments

![Team Field Assignments Diagram](image-url)
Today’s Schedule

Community Meeting (2:30 – 3:30 AM)
• What is a Road Safety Audit?
• Joe Moretti II / Buena Vista Apartments study area historical crash review
• Request input from community for potential improvements

PM Peak Field Visit (3:30 – 5:30 PM)
Nighttime Field Visit
Midday Field Visit (9 – 11 AM) – Wednesday, May 16th

Tomorrow’s Schedule May 16th

Pre-Audit Refresher (8:30 – 9:00 AM)
Midday Field Visit (9 – 11 AM)
Debrief RSA Observations Meeting (11 AM – 12 PM)
• Discuss safety issues observed during field review
• Summarize and record observations by intersection and segment
• Discuss and record potential improvements/countermeasures
ROAD SAFETY AUDIT INTRODUCTION

Basic Concepts

- What is a Road Safety Audit (RSA)?
- Why do we need RSAs?
- When do we conduct RSAs?
A road safety audit is a formal safety performance examination of an existing or future road or intersection by an independent audit team.

**What is a Road Safety Audit?**

- **formal:** procedures and documentation
- **safety performance:** focus on safety
- **independent:** auditors detached from project team
- **audit team:** “Multi-disciplinary Team” Highway safety and traffic operations professionals, Law enforcement, Transit Agencies, Maintenance, Community stakeholders
A Road Safety Audit ...

- Considers the safety of *All Road Users*
- Examines the interaction of road users and roadway elements
- Identifies safety issues
- Proactively considers and recommends mitigation measures

Why do we need RSAs?

Typical Reported Crash Causes

- **Human Factors (93%)**
- **Road Environment Factors (34%)**
- **Vehicle Factors (13%)**

Source: HSM Chapter 3 Figure 3-3
Why do we need RSAs?

- Relatively few road-related safety issues are identified in collision reports.
- Road designs should anticipate and accommodate road user behaviors (driver/pedestrian/bicycle/transit).
- Easier to design and build safer roads than to modify some entrenched driver/pedestrian/bicycle and transit rider behaviors.

Why do we need RSAs?

- There are many competing interests in the project implementation process:
  - Safety, Cost, Environment, Capacity, Accommodation of Users, etc.
- Safety is an explicit consideration in the project implementation process; safety must not “fall through the cracks”.
- RSAs identify opportunities to improve safety.
Joe Moretti II/Buena Vista Apartments

Crash Frequency

- 2,480 total crashes between 2014 and 2018
  - 3 fatal, 309 injury, 2,168 PDO
  - 15 bicyclist and 28 pedestrian
- Higher crashes observed in March and October
- Higher crashes observed on Thursday/Friday, PM peak hour

Study Area Crash Statistics
Joe Moretti II/Buena Vista Apartments

Study Area Crash Statistics

- 710 sideswipe (29%), 597 angle (24%), and 595 rear-end (24%)
- 28% of crashes in non-daylight conditions
  - 1% of crashes were drug or alcohol involved
Study Area Statistics of Elderly Crashes

- 333 total crashes between 2014 and 2018
  - 49 injury, 284 PDO
  - 2 bike and 10 pedestrian
- Higher crashes observed in March, August, and October
- Higher crashes observed on Thursday/Friday, PM peak hour
Joe Moretti II/Buena Vista Apartments

Study Area Statistics of Elderly Crashes

- 108 sideswipe (32%), 93 angle (28%), 58 rear-end (17%), and 11 left turn (3%) crashes
- 12% of crashes in dark conditions with lighting
- 186 of 305 crashes occurred within signalized intersection influence areas

Bicycle & Pedestrian Crashes

- Map showing crash locations with symbols for pedestrian involved, bicycle involved, traffic signal, and bus stops

Miami-Dade TPO Figure 3 Bicycle & Pedestrian Crashes
Nighttime Crashes

- Miami-Dade TPO
- Figure 4 Nighttime Crashes

Fatal & Severe Injury Crashes

- Miami-Dade TPO
- Figure 5 Fatal & Severe Injury Crashes

- Run-off-the-Road (2018)
- Head-on (2015)
- Pedestrian (2016)
Appendix D
Community Meeting Sign-in Sheet
<table>
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<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Organization</th>
<th>Telephone Number</th>
<th>Email</th>
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</thead>
<tbody>
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  - Summary of Suggestions ...................................................................................................................... 42

## List of Appendix

- Appendix A Historical Crash Summary
- Appendix B Transit Ridership
- Appendix C Field Material and Presentation
- Appendix D Community Meeting Sign-in Sheet
Acronyms

ADA: Americans with Disabilities Act
FDOT: Florida Department of Transportation
MDC: Miami-Dade County
MDT: Miami-Dade Transit
MPH: Miles Per Hour
MUTCD: Manual on Uniform Traffic Control Devices
RSA: Road Safety Audit
TPO: Transportation Planning Organization
Study Area Characteristics

Field Review Dates:
June 26, 2019

Participants:
Kevin Walford – Miami-Dade Transportation Planning Organization
David Henderson – Miami-Dade Transportation Planning Organization
Jacques Defrant – Florida Department of Transportation, District 6
Ryan Raghunandan – Florida Department of Transportation, District 6
Irene Soria Cordero – Miami-Dade County Dade Transportation & Public Works
Yanek Fernandez – Miami-Dade County Dade Transportation & Public Works
Phillip Haas – Kittelson & Associates, Inc.

Project Characteristics:
Field Review Type: All Users (Senior Residents, Vehicular, Pedestrian, Bicycle, Transit)
Adjacent Land Use: Urban; Commercial, Residential, Office, Industrial
Typical Posted Speed Limit: 30 MPH
Roadway Classifications: Urban Principal Arterial, Urban Minor Arterial, Urban Major Collector, Urban Local
Terrain: Flat
Field Review Climatic Conditions: Sunny

Project Limits:
The Miami-Dade County (MDC) Transportation Planning Organization (TPO) has conducted a series of Road Safety Audits (RSA) at selected assisted living facilities as a result of the November 2017 Aging Road Users Strategic Safety Plan recommendations. This RSA report documents the safety performance examination results of the existing roadway network in the vicinity of Hialeah Residences and Vivian Villas. The project limits include a one-quarter mile radius around Hialeah Residences and Vivian Villas and are shown in Figure 1. Appendix A provides a detailed summary of the historical crash trends experienced within the study boundaries.
Figure 1
Study Area

Miami-Dade TPO

Data Source: Signal 4 Analytics (2014-2018)
Land Use Context:
There is approximately 5 miles of roadway within the study area. The land use within the study area is made up mostly of single family and multi-family residential use with Hialeah Residence located on W 46th Street and Vivian Villas on W 47th Place. There are several educational land uses scattered throughout the area including South Florida Institute of Technology and America’s Christian Future K-8 on W 47th Place and Florida National University on W 12th Avenue. There is a focus of commercial use along W 12th Avenue and W 49th Street. Suggested changes to the study area should consider the varying contexts and address all users (e.g., senior residents, vehicles, pedestrians, bicycles, transit users). Due to varying contexts within the study area, the focus may shift from one mode type to another.

Transit:
There are four Miami-Dade Transit (MDT) routes through the study area; route 73 and 267 run north/south along W 12th Avenue and route 33 and 54 run east/west along W 49th Street. Appendix B provides a summary of the transit ridership by route.

Road Safety Audit Process:
The RSA process involves multi-disciplinary representatives from various stakeholder groups, such as traffic operations, roadway design, safety, transportation planning, transit, and law enforcement. An RSA is typically conducted to identify potential safety issues and provide improvement suggestions in a team collaborative team environment. The November 2017, MDC TPO Aging Road Users Strategic Safety Plan recommends RSAs to be conducted for the top tier locations. This RSA was commissioned through the FY2019/2020 Unified Planning Work Program to develop short-term maintenance, near-term project, and long-term project suggestions to improve safety for all transportation users. This study is intended to identify engineering, education, and enforcement improvements to be considered by MDC TPO staff and partner agencies (e.g., City of Miami, Miami-Dade County, FDOT, Miami-Dade Transportation & Public Works). Some improvements presented in this report may be implemented in the short-term while other suggested improvements will require further evaluation prior to implementation. Each engineering improvement identified in this study is classified into one of three categories:

- **Short-Term or Maintenance Project** – it is anticipated that issues identified for maintenance may be addressed on a short timeframe and at a relatively low cost.
- **Near-Term Project** – activities that may be incorporated into an upcoming construction project in the area, including milling and resurfacing projects, or programmed separately through a pushbutton contract.
- **Long-Term Project** – activities that may be incorporated into upcoming construction projects or may need to be programmed for funding as separate projects and need further evaluation.

The field review was conducted on Wednesday, June 26, 2019. On Wednesday, the team met in the morning to discuss the study area and crash history. A walking assessment was conducted, and observations were made during the mid-day peak hours, PM peak hours, and the night field review. In the afternoon, the RSA team gathered to discuss suggestions for potential improvements in the study area. Appendix C provides a copy of the material shared with the RSA Team in preparation for the field review. Appendix D provides a copy of the sign-in sheets for the community meetings and field visit.

The safety concerns and suggested improvements reflect the consensus of the safety assessment team and not necessarily that of the MDC TPO.
Field Review Findings

Location: STUDE AREA-WIDE

The following section will include general recommendations throughout the study-area. For location-specific recommendations, see the location specific issues following this section.

Issue #1: Narrow and Partially Obstructed Sidewalks

Description of Issue:
Some sidewalks were observed to be narrow and/or are obstructed by utilities, sign poles, and vegetation.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Vegetation adjacent to sidewalks throughout the corridor should be properly maintained; may require code enforcement on private property.
- Long-Term Project – Recommend further study to determine if alternative sidewalk alignment and/or additional right-of-way is necessary to allow for wider sidewalk where obstructions are present.
Issue #2: Poor Sight Distance at Intersections

Description of Issue:
Due to on street parking and other objects such as structures, walls/fences, and trees, many intersections have insufficient sight distance for vehicles.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Recommend further study to determine if removing sight obstructions and reducing on-street parking near intersections is needed to increase sight distance.
Issue #3: Nighttime Issues

Description of Issue:
Lighting Issues –
- W 44th Place by W 14th Avenue, multiple overhead streetlights are out on W 44th Place
- W 42nd Place west of W 12th Lane, an overhead streetlight is out
- W 43rd Place east of W 16th Avenue, an overhead streetlight is out
- W 49th Place, west of W 12th Avenue, an overhead streetlight is out
• W 49th Street west of W 12th Lane, missing lights from poles
• W 13th Avenue and W 46th Street, an overhead streetlight is out on the southwest corner.

Signage Issues –
• W 10th Avenue and W 48th Street, there is poor visibility of median and keep right sign facing westbound traffic.
• W 12th Avenue and W 48th Street, poor visibility of oncoming traffic. This is a potential location for a bi-directional media as the intersection has right turn only on the westbound approach.
• W 49th Street and W 12th Avenue, the internally illuminated sign on the mast arm of the southwest is off.
• W 46th Street and W 16th Avenue, all internally illuminated signs are off
• W 12th Avenue along the study limits: curbs / medians have low or no visibility.

Suggestions for Improvement:
• Short-Term or Maintenance Project –
  Conduct maintenance efforts to replace burnt out lights and replace signs that are damaged or have poor retroreflectivity.
• Near-Term Projects –
  Install lighting where lighting is currently missing.
  Install a bi-directional medial at W 12th Avenue and W 48th Street.
  Use paint or object markers to increase visibility at night of medians and curbs.
The following section will include recommendations at specific locations within the study area.

**Location: W 12th Avenue and W 46th Street Intersection**

**Issue #4: Pedestrian Facility**

**Description of Issue:**
The intersection is signalized for the north, south and west legs. However, the east leg is stop controlled with a Right-Turn Only restriction. There are marked crosswalks on the east, west, and south legs of the intersection, the north leg does not have marked crosswalk. Pedestrian signals along with push buttons are available for the south leg (east-west peds), however pedestrian signal heads are missing on the east and west legs (north-south peds).

**Suggestions for Improvement:**
- Near-Term Project – Install pedestrian signal heads and push buttons on the west leg.
- Long-Term Project – Evaluate incorporating the east leg as part of the intersection, including pedestrian signal heads and push buttons. In addition, consider adding a marked crosswalk on the north leg.
Location: **W 12th Avenue and W 45th Place Intersection**

**Issue #5: Traffic Control**

**Description of Issue:**
The intersection is the only location that vehicles from the neighborhood to the east are allowed to turn left to head southbound on W 12th Avenue, W 46th Street and W 48th Street are stop controlled with right-turn only restrictions. It was observed that a majority of the vehicles exiting this intersection were turning left. There is a driveway access located across this intersection on the west side of W 12th Avenue.

**Suggestions for Improvement:**

- Near-Term Project –
  Consider restricting turning movements to right-in right-out only for both the east and west intersection legs with a bi-directional median.
Location: **W 12th Avenue and W 44th Place Intersection**

**Issue #6: Pedestrian Facility**

**Description of Issue:**
It was observed that only the east leg crosswalk has special emphasis markings. Street name sign on the mast arm across the east leg of the intersection facing eastbound traffic is broken.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Install special emphasis crosswalk markings for all intersection legs. Replace street name sign on the mast arm across the east leg of the intersection.
Location: W 12th Avenue and W 44th Place Intersection

Issue #7: Pedestrian Facility

Description of Issue:
Abandoned telephone circuit junction box on utility pole within sidewalk area on the southwest corner of the intersection (south side of W 44th Place) has loose wires and exposed components which could pose a hazard to pedestrians and bicyclists. Additionally, porous, rubber section within sidewalk has caved in and posed a tripping hazard to pedestrians.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Coordinate with utility owner to remove the hazard. Remove the rubber section and replace with concrete.
Issue #8: Pedestrian Facility

**Description of Issue:**
This segment has bus stops northbound and southbound and the closest crosswalks (east-west) is at W 44th Place and W 37th Street or 0.15 and 0.07 miles, respectively. In addition, there were no pedestrian signal heads present at the intersection of W 12th Avenue and W 41st Street. Attached is the ridership for Route 73 for these bus stops for 2018 and 2019.

**Suggestions for Improvement:**
- **Near-Term Project** –
  Add a crosswalk to the north leg at the intersection of W 12th Avenue and W 41st Street.
  Add pedestrian signals at the intersection of W 12th Avenue and W 41st Street.

- **Long-Term Project** –
  Consider:
  - evaluating the need for a midblock crosswalk north of W 42nd Street,
  - relocating the southbound bus stop north of W 42nd Street.
Location: **W 13th Lane and W 46th Street Intersection**

**Issue #9: Traffic Control**

**Description of Issue:**
Residents from Hialeah Residence shared that they use this intersection to cross north-south. The intersection provides crosswalks on the north and south legs to accommodate east-west crossings and no crosswalks are provided for the north-south crossings. It was observed that vehicles traveling east-west speed along W 46th Street as the only controlled intersections are at W 12th Avenue and W 16th Avenue (0.50 miles). The curb ramps are missing detectable warnings.

**Suggestions for Improvement:**
- **Long-Term Project** – Conduct analysis for traffic calming measures along the segment, including a roundabout at the intersection of W 46th Street and W 13th Lane. Consider adding midblock crossing/additional crossing along this segment north-south.
Description of Issue:
Two driveway entrances are located adjacent to each other at the bend of a 90-degree curve. The driveway into the shopping center to the north was observed to be used as a cut-through route, experiencing relatively heavy use. Due to the 90-degree curve, visibility of the driveways is limited on several of the approaches.

Suggestions for Improvement:
- Long-Term Project – Conduct an evaluation for the need of an all-way stop-controlled intersection at this location, especially to avoid conflicts between northbound vehicles accessing the driveways and westbound vehicles coming from W 47th Place headed southbound on W 13th Lane.
Issue #11: Signage

Description of Issue:
Sign is faded and illegible on the west side of W 12th Avenue along southbound lanes just south of W 43rd Place.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Review necessity of sign and replace as required.
Location: **W 12<sup>th</sup> Avenue and W 44<sup>th</sup> Place Intersection**

**Issue #12: Traffic Control**

![Image of Traffic Control_issue_12](image-url)

**Description of Issue:**
Vehicles exiting the Walgreens on the southeast corner of the intersection through the driveway on the east side of W 12<sup>th</sup> Avenue currently turn right to travel northbound or make an illegal left turn to travel southbound. The left turn movement drive over the yellow restricted pavement marking. The queue to make this movement can cause a disruption of traffic flow for vehicles driving northbound on W 12<sup>th</sup> Avenue.

**Suggestions for Improvement:**
- **Near-Term Project** –
  Modify driveway lane configuration to allow right turn only movements from the W 12<sup>th</sup> Avenue southeast corner of the intersection. Pavement arrow markings and a lane assignment should be installed showing right turn only.
  In addition, extend the median island to prevent the southbound crossing movement.
Issue #13: Pedestrian Facility

Description of Issue:
A length of broken cable hangs from a transmission line pole and is loosely coiled on ground near sidewalk on the northwest corner of the intersection. If disturbed, a pedestrian or bicyclist could become entangled.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Contact appropriate maintaining agency to remove or reattach cable as appropriate.
Location: **W 12th Avenue and W 44th Place Intersection**

**Issue #14: Pedestrian Facility**

**Description of Issue:**
The pedestrian pushbuttons and attendant signs on all four corners are on a 45-degree angle with respect to the streets they control. The name of the street for which the pedestrian signals are activated, W 12th Avenue, is missing from the sign. (Pedestrian signals for the east and west legs of the intersection display WALK automatically during the north-south through movement and do not have pushbuttons.) A pedestrian could be confused by the configuration and improperly cross an approach. (A bicyclist who pushed the button while the RSA team was present thought the pushbutton controlled the pedestrian signals to cross W 44th Place.)

**Suggestions for Improvement:**
- Short-Term or Maintenance Project –
  Modify or install new pushbutton signs indicating the pushbutton is for crossing W 12th Avenue.
Location: **W 12th Avenue and W 44th Place Intersection**

**Issue #15: Pedestrian Facility**

![Image of sidewalk missing and grass growing]

**Description of Issue:**
A section of sidewalk on the north side of W 44th Place just west of W 12th Avenue is missing, and grass has begun to grow in its place.

**Suggestions for Improvement:**
- Near-Term Project – Fill in missing section of sidewalk.
Location: **W 12th Avenue and W 45th Place Intersection**

**Issue #16: Pedestrian Facility**

![Image of pedestrian facility issue](image)

**Description of Issue:**
Exposed signal enclosure on the east side of W 12th Avenue along the northbound lanes just north of W 45th Place. Becomes a tripping hazard within the minimum width of the sidewalk.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Replace the lid of the signal enclosure.
Location: **W 12th Avenue and W 46th Street Intersection**

**Issue #17: Pedestrian Facility**

*Description of Issue:*
Sidewalk clear width less than 32 inches due to a post mounted Do Not Block the intersection sign and cabinet on the southeast corner of the intersection.

*Suggestions for Improvement:*
- **Short-Term or Maintenance Project** – Consider alternative sign mounting options or placement in order to remove the sidewalk obstruction.
- **Near-Term Project** – Consider relocating the cabinet to allow for adequate sidewalk width.
Location: **W 12th Avenue and W 47th Street Intersection**

**Issue #18: Pedestrian Facility**

![Image of the location with a person in a safety vest]

**Description of Issue:**
Sidewalk clear width less than 32 inches on the east side of W 12th Avenue just north of W 47th Street.

**Suggestions for Improvement:**
- Near-Term Project –
  Coordinate with utilities to relocate pole to satisfy ADA standards.
### Location: Location: **W 12\(^{th}\) Avenue and W 47\(^{th}\) Street Intersection**

**Issue #19: Pedestrian Facility**

![Image of debris and trash on the sidewalk]

**Description of Issue:**
A significant amount of debris and trash was observed on the sidewalk of the north side of W 47\(^{th}\) Street, east of W 12\(^{th}\) Avenue.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project – Remove trash and debris from sidewalk.
Location: **W 12th Avenue and W 50th Place Intersection (Facing North)**

**Issue #20: Pedestrian Facility**

![Image of sidewalk]

**Description of Issue:**
Sidewalk appears to drop gradually in grade. Area could be difficult to traverse.

**Suggestions for Improvement:**
- Near-Term Project – Correct sidewalk grades to allow safe usage.
Location: 1012-14 W 49th Street

Issue #21: Pedestrian Facility

Description of Issue:
On the south side of W 49th Street just west of W 10th Avenue, the curb area of sidewalk over the drainage grate is crumbling and a significant chunk has broken off, creating a tripping hazard.

Suggestions for Improvement:
• Near-Term Project –
  Repair or replace the broken sidewalk.
Location: **W 12th Avenue and W 49th Street**

**Issue #22: Bicycle Facility**

![Image of bicycle facility]

**Description of Issue:**
Bicyclist resorting to using sign poles from car dealership to secure their bicycle on the southwest corner of the intersection.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project –
  Increase the number of bike racks along W 49th Street. Several cyclists were observed along W 49th Street during the field visit.
Location: W 12th Lane and W 44th Place Intersection

Issue #23: Pedestrian Facility

Description of Issue:
Crosswalk on W 12th Lane does not have truncated domes at both ends.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Install truncated domes on curb ramps.
Location: W 12th Avenue and W 46th Street Intersection

Issue #24: Traffic Control

Description of Issue:
Overhead limbs of roadside trees obscure driver’s view of traffic signal heads until vehicle is close to the intersection on the eastbound approach on W 46th Street.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Trim overhead foliage.
Location: **W 12th Avenue and W 46th Street Intersection**

**Issue #25: Pedestrian Facility**

**Description of Issue:**
There are no pedestrian signal heads on the west leg of the intersection. Signal poles are existent on each corner.

**Suggestions for Improvement:**
- Near-Term Project –
  Install pedestrian signal heads with pushbuttons to allow WALK during N-S through phase.
Location: **W 12th Avenue and W 46th Street Intersection**

**Issue #26: Pedestrian Facilities**

**Description of Issue:**
This crosswalk is the only one at the intersection having pedestrian signals. Observations of the pedestrian signal operations reveal a 7-second WALK followed by a 10-second flashing don’t walk countdown. The countdown period is insufficient to allow the pedestrian to cross the five traffic lanes or 65 feet.

**Suggestions for Improvement:**
- **Near-Term Project** –
  Adjust pedestrian signal clearance intervals on W 12th Avenue to accommodate at a minimum a walking speed of 3.5 seconds for all pedestrian crossing times.
Location: **W 12<sup>th</sup> Avenue and W 46<sup>th</sup> Street Intersection**

**Issue #27: Pedestrian Facility**

[Image of sidewalk with trees and vehicles]

**Description of Issue:**
Roadside tree foliage impedes pedestrian movements on the sidewalk on the east side of W 12<sup>th</sup> Avenue just south of W 46<sup>th</sup> Street.

**Suggestions for Improvement:**
- Short-Term or Maintenance Project –
  Trim foliage.
**Location:** W 12th Avenue between W 44th Place and W 42nd Place

**Issue #28: Roadway**

**Description of Issue:**
There are two raised median areas which have three and five palm trees respectively. The trees are sizable with trunks about 10-12 inches in diameter. The terminals of the curbed median are paved and tapered from pavement grade up to full-depth, Type-F curb height. This essentially forms a ramp for vehicles straying into the median area, providing no impediment to impacting the palm trees. The first palm tree in each of the two median areas bear evidence of vehicle impacts. The posted speed limit on this section of W 12th Avenue is 40 MPH. The palm trees pose a potential hazard to motorists.

**Suggestions for Improvement:**
- **Short-Term or Maintenance Project** – Replace the palm trees with less hazardous landscaping, such as bushes.
- **Near-Term Project** – Remove the tapered curve, providing a full curb height around the nose of the median.
Location: **W 12th Avenue North of W 42nd Street**

**Issue #29: Pedestrian Facility**

**Description of Issue:**
There are midblock bus stops on both sides of W 12th Avenue, several hundred feet north of a raised median section. Pedestrians disembarking buses most likely cross W 12th Avenue at the bus stop locations instead of walking south to W 41st Street which is a signalized intersection.

**Suggestions for Improvement:**
- Near-Term Project –  
  Consider relocating the bus stops to a point near the northern terminus of the raised median and provide a paved refuge area within the median for pedestrians crossing between relocated bus stops.
Location: W 46th Street between W 12th Avenue and W 15th Avenue

Issue #30: Pedestrian Facility

Description of Issue:
Overhead branches from trees on adjacent private properties encroach upon sidewalks and impede pedestrians and bicyclists at several locations along W 46th Street.

Suggestions for Improvement:

- Short-Term or Maintenance Project –
  Coordinate with code enforcement to trim tree branches that impede the sage passage on the sidewalk.
Location: **W 49th Place Between W 14th Lane and W 12th Lane**

**Issue #31: Parking**

**Description of Issue:**
Vehicles parking in restricted parking zones along the southside sidewalk on W 49th Place restrict line of sight for vehicles attempting to pull out onto the road.

**Suggestions for Improvement:**
- Near-Term Project –
  Increase enforcement of parking restrictions.
Location: W 12th Lane and W 49th Place Intersection

Issue #32: Pedestrian Facility

Description of Issue:
Crosswalk paint is worn out on the south side of the intersection. The southeast corner of the intersection is missing a curb ramp and access to the sidewalk is blocked by landscape.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Conduct maintenance to repaint crosswalk.
- Near-Term Project – Install curb ramp to connect with crosswalk.
Location: **W 49th Place West of W 12th Lane**

**Issue #33: Pedestrian Facility**

**Description of Issue:**
The sidewalk ends as it connects to the driveway at Courtyards II Condominium and turns into a gravel pathway. This creates a tripping hazard for pedestrians.

**Suggestions for Improvement:**
- Near-Term Project – Fill in missing section of sidewalk.
Location: W 12th Avenue and W 49th Place Intersection

Issue #34: Pedestrian Facility

Description of Issue:
The Ford Dealership on the southwest corner of the W 49th Place and W 12th Avenue intersection has vehicles parked in driveways that are blocking sections of the sidewalk.

Suggestions for Improvement:
- **Short-Term or Maintenance Project** –
  Remove vehicles from the sidewalk and increase enforcement to eliminate future occurrences.
Summary of Suggestions

This assessment considers operational and safety related issues for all users near Hialeah Residences and Vivian Villas. This study was commissioned by the MDC TPO to develop recommendations to improve the safety of all users throughout the study area. The suggestions identified in this report are summarized as follows:

Improvements:
Each suggestion identified in this study is classified into one of three categories:

- Short-Term or Maintenance Project – it is anticipated that issues identified for maintenance may be addressed by public agency staff on a short timeframe and at a relatively low cost.
- Near-Term Project – activities that may be incorporated into an upcoming construction project in the area, including milling and resurfacing projects, or programmed separately through a pushbutton design-build contract.
- Long-Term Project – activities that may be incorporated into upcoming construction projects or may need to be programmed for funding as separate projects.

Education:
Potential corridor-focused education efforts are noted below:

- Educate Bicyclists: Warn bicyclists of the risks associated with riding on the sidewalk against the flow of traffic
- Educate Bicyclists: Educate bicyclists regarding best practices for nighttime riding and provide resources (e.g., bike lights, reflectors, wear bright or retroreflective clothing)
- Educate Motorists: Yield to pedestrians in crosswalks
- Educate Motorists: Watch for pedestrians and bicyclists at driveways (look both ways)
- Educate Pedestrians: Use of designated crosswalks and use of pedestrian signals
- Educate Pedestrians: Educate pedestrians regarding being visible at night

Enforcement:
Potential corridor-focused enforcement efforts are noted below:

- Motorists: Consider investigating state or federal grants to increase speed enforcement in areas with high volumes of transit users, pedestrians, and bicycles.

The issues and suggested improvements reflect the consensus of the safety assessment team and not necessarily that of the MDC TPO.

The following table lists each issue identified within the study area as well as its categorized improvement type.
## SUMMARY OF RECOMMENDATIONS

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<th>Issue Type</th>
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Appendix A
Historical Crash Summary
Senior Living Facilities
Road Safety Audit
Vivian Villas and Hialeah Residence
City of Hialeah, Florida

Background

The Senior Living Facilities Road Safety Audit focused on the areas surrounding Vivian Villas and Hialeah Residence includes several corridors as follows that were identified as focus areas based on their crash history:

- W 49th Pl from W 13th Ln to W 12th Ln – 0.12 miles
- W 49th St (SR 932) from east of W 14th Ln to west of W 10th Ave – 0.42 miles
- W 46th St from east of W 16th Ave to W 12th Ave – 0.36 miles
- W 44th Pl from W 15th Ave to west of W 10th Ct – 0.51 miles
- W 14th Ave from W 42nd Pl to W 44th Pl – 0.15 miles
- W 12th Ave from W 42nd St to W 50th Pl – 0.58 miles

The general segment characteristics for the area reviewed below:

- Posted speed limits of 40 mph on SR 932 and W 12th Ave, 35 mph on W 44th Pl and W 46th St, with roadways through residential areas generally unsigned.
- SR 932 is a 6-lane divided roadway, W 12th Ave is a 4-lane divided roadway, W 44th Pl and W 46th St are 2-lane roadways with a two-way left-turn lane, and the majority of the roads in residential areas a two-lane roads with no marked centerline.
- There are no marked bicycle facilities.
- There are continuous sidewalks on both sides of the roadways throughout the majority of the study area.
- Overhead street lighting is present at some intersections and sporadic along segments.
- Curb and gutter is present throughout most of the study area.
- The land use is primarily commercial along SR 932 and W 12th Ave, with single-family and multi-family residential throughout the remainder of the study area.
- This area is served by bus routes 33 and 54 along SR 932 and routes 73 and 267 along W 12th Ave.
- There are three (3) signalized intersections throughout the study area:
  - SR 932 at W 12th Ave
    - Special emphasis crosswalk markings
    - All crosswalks include pedestrian actuated signals with push buttons
  - W 46th St at W 12th Ave
    - Standard crosswalk markings and special emphasis markings on east leg
    - All crosswalks include pedestrian actuated signals with push buttons
  - W 44th Pl at W 12th Ave
    - Standard crosswalk markings, no crosswalk on north leg
    - No pedestrian walk signals, only pedestrian push-buttons on south leg
Crash History (2014 – 2018):

Five (5) years of available vehicular crash data, 2014 to 2018, was obtained from the Signal Four Analytics database and utilized for historical crash analysis.

Overall Study Area

A total of 1,779 vehicular crashes were reported over the five-year study period. Of the 1,779 crashes reported during the study period, there was one fatal crashes (0.1 percent), 174 injury crashes (10 percent), and 1,604 property damage only (PDO) crashes (90 percent). There were 13 bicycle involved crashes (0.7 percent) and 32 pedestrian involved crashes (2 percent):

The reported crashes are displayed by different measures of time (year, month, day, and hour) below. Overall, the number of crashes has increased between 2014 and 2017, and decreased from that point in 2018. December (171 crashes) and August (164 crashes) were the highest crash months during the year, while Friday (301 crashes) was the highest crash day of the week. Seventy-four (79) percent of all crashes occurred between 7:00 AM and 7:00 PM.

The reported crashes by crash type are displayed below. Twenty-six (26) percent (463 crashes) were rear end crashes, twenty-two (22) percent (376 crashes) were parking lot crashes, and seventeen (17)
percent (227 crashes) were angle crashes. Twenty-one (21) percent of crashes occurred under non-daylight conditions.

Among the crashes that occurred during non-daylight conditions, general trends are somewhat similar to those presented for all crashes in the study area. Total non-daylight crashes increase slightly from 2014 through 2018 (61 to 73 crashes) and then increase significantly in 2018 (101 crashes). Rear-end, parking lot, and angle crashes remain the predominant crash types. Non-daylight crashes do occur more heavily on weekends, but they highest crash day remains Friday (63 crashes, 17 percent). High crash locations of the non-daylight crashes are similar to overall high crash locations, with clusters along SR 932, W 44th Pl, W 12th St, and W 49th Pl. Eight-eight (88) percent of the non-daylight crashes were PDO crashes, 11 percent were injury crashes, and the one fatal crash that occurred in the study area occurred in non-daylight conditions (0.3 percent of non-daylight crashes).

A total of 441 crashes in the study area involved elderly users, with 88 percent PDO crashes, 11 percent injury crashes, and one fatal crash (0.2 percent). These crashes primarily occurred between 7am and 7pm (91 percent) and were fairly evenly distributed from Monday to Saturday throughout the week, with the lowest number of crashes occurring on Sunday (39 crashes, 9 percent). The most prevalent crash types included rear end (22 percent), angle (17 percent), and parking lot (16 percent).

Further details on crashes located within the six previously identified high-crash corridors in the study area are provided below.

**W 49th Pl from W 13th Ln to W 12th Ln (48 total crashes)**
- 10 percent (5 crashes) were injury-related, and 90 percent (43 crashes) were PDO.
- 33 percent (16 crashes) were classified as “other” crash type, 23 percent (11 crashes) were left-turn, and 14 percent (7 crashes) were angle.
- 29 percent (14 crashes) occurred in non-daylight conditions.
- 29 percent (14 crashes) occurred between 4:00 PM and 7:00 PM.
- 3 crashes were pedestrian involved and 1 crash was bicyclist involved.
- 0 crashes were alcohol or drug related.
W 49th St (SR 932) from east of W 14th Ln to west of W 10th Ave (584 total crashes)

- 1 fatal crash, 10 percent (57 crashes) were injury-related, and 90 percent (526 crashes) were PDO.
- 36 percent (210 crashes) were rear end, 24 percent (140 crashes) were classified as “other”, and 19 percent (110 crashes) were sideswipe.
  - 76 of the 210 rear end crashes occurred in the eastbound direction.
  - 82 of the 210 rear end crashes occurred in the westbound direction.
- 25 percent (145 crashes) occurred in non-daylight conditions.
- 32 percent (188 crashes) occurred between 11:00 AM and 3:00 PM.
- 11 crashes were pedestrian involved and 4 crashes were bicyclist involved.
- 3 crashes were alcohol or drug related.

W 46th St from east of W 16th Ave to W 12th Ave (166 total crashes)

- 16 percent (27 crashes) were injury-related, and 84 percent (139 crashes) were PDO.
- 27 percent (45 crashes) were angle, 24 percent (40 crashes) were rear end, and 19 percent (32 crashes) were classified as “other” crash type.
  - 13 of the 40 rear-end crashes occurred in the eastbound direction.
  - 12 of the 40 rear-end crashes occurred in the southbound direction.
  - 7 of the 40 rear-end crashes occurred in the westbound direction.
- 24 percent (39 crashes) occurred in non-daylight conditions.
- 37 percent (62 crashes) occurred between 11:00 AM and 3:00 PM.
- 3 crashes were pedestrian involved and 1 crash was bicyclist involved.
- 0 crashes were alcohol or drug involved.
W 44th Pl from W 15th Ave to west of W 10th Ct (217 total crashes)

- 13 percent (28 crashes) were injury, and 87 percent (189 crashes) were PDO.
- 30 percent (66 crashes) were rear end, 19 percent (42 crashes) were classified as “other”, and 18 percent (39 crashes) were left-turn.
  - 26 of the 66 rear end crashes occurred in the westbound direction.
  - 13 of the 66 rear end crashes occurred in the eastbound direction.
  - 13 of the 66 rear end crashes occurred in the northbound direction.
- 26 percent (56 crashes) occurred in non-daylight conditions.
- 38 percent (74 crashes) occurred between 4:00 PM and 8:00 PM.
- 3 crashes were pedestrian involved and 2 crashes were bicyclist involved.
- 0 crashes were alcohol or drug involved.

W 14th Ave from W 42nd Pl to W 44th Pl (55 total crashes)

- 9 percent (5 crashes) were injury-related, and 11 percent (50 crashes) were PDO.
- 33 percent (18 crashes) were angle, 24 percent (13 crashes) were classified as “other”, and 18 percent (10 crashes) were left-turn.
- 20 percent (11 crashes) occurred in non-daylight conditions.
- 46 percent (25 crashes) occurred between 2:00 PM and 6:00 PM.
- 1 crash was pedestrian involved and 0 crashes were bicyclist involved.
- 0 crashes were alcohol or drug involved.
W 12th Ave from W 42nd St to W 50th Pl (795 total crashes)

- 14 percent (111 crashes) were injury-related, and 76 percent (684 crashes) were PDO.
- 34 percent (269 crashes) were rear end, 17 percent (132 crashes) were classified as “other”, and 16 percent (125 crashes) were sideswipe.
  - 98 of the 269 rear end crashes occurred in the northbound direction.
  - 94 of the 269 rear end crashes occurred in the southbound direction.
  - 34 of the 269 rear end crashes occurred in the eastbound direction.
  - 31 of the 269 rear end crashes occurred in the westbound direction.
- 23 percent (180 crashes) occurred in non-daylight conditions.
- 26 percent (203 crashes) occurred between 12:00 PM and 3:00 PM.
- 13 crashes were pedestrian involved and 7 crashes were bicyclist involved.
- 3 crashes were alcohol or drug involved.
Miami-Dade TPO

Figure 1
Study Area

- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes
- Study Area
- Parks
- Education
- Industrial
- Major Transmission Lines
- Institutional
- Commercial
- Residential
- Office
- Vacant

Data Source: Signal 4 Analytics (2014-2018)
Figure 2
Crash Frequency

- All Crashes
- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes
- Study

Data Source: Signal 4 Analytics (2014-2018)
Figure 3
Bicycle & Pedestrian Crashes
Figure 4
Miami-Dade TPO
Nighttime Crashes
Figure 5
Fatal & Severe Injury Crashes

Data Source: Signal 4 Analytics (2014-2018)
Figure 6
Crashes with Elderly Road Users

- Elderly Crashes
- Pedestrian Involved Crashes
- Bicycle Involved Crashes
- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes
- Study Area

Data Source: Signal 4 Analytics (2014-2018)
Appendix B
Transit Ridership
## Transit Ridership Data by Route and Stops (weekday)

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Appendix C
Field Material and Presentation
COMMUNITY FEEDBACK FOR ROAD SAFETY

When: Wednesday, June 26th @ 10:00 AM
Where: Hialeah Residences
1280 West 46th Street Hialeah, FL 33012

We want YOUR input to improve road safety. We are looking to document any potential road issues you have encountered walking, driving, or bicycling and recommend improvements.
Road Safety Audit Kick-Off Meeting

MIAMI-DADE TRANSPORTATION PLANNING ORGANIZATION

Hialeah Residences and Vivian Villas RSA | June 26, 2019

Purpose of Field Visit

- Mid-Day and PM Field Visits – Corridors with High Crash Frequency
- Nighttime Field Visit – Sign retroreflectivity and pavement markings conditions

Assign RSA responsibilities

Schedule

Kick-Off Meeting (9:30 – 10:00 AM)

- Purpose of Field Visit
  - Mid-Day and PM Field Visits – Corridors with High Crash Frequency
  - Nighttime Field Visit – Sign retroreflectivity and pavement markings conditions
- Assign RSA responsibilities

Community Meeting – Hialeah Residences (10:00 – 11:00 AM)
Community Meeting – Vivian Villas (11:15 AM – 12:15 PM)
Mid-Day Field Visit (12:30 PM – 2:30 PM)
PM Peak Field Visit (4:00 PM – 6:00 PM)
Debrief on Field Observations – Hialeah Residences (6:15 PM – 7:15 PM)
**Project Location Identification**

What is the issue?

- Over 10% of all crashes in Miami-Dade County between 2008-2014 occurred within ¼ mile of elderly living centers

How was this location selected?

- Over 140 older adult residential living centers were reviewed
- ¼ mile radius used as the study area for each living center
- Living centers were ranked by the following criteria:
  - Total number of crashes from 2012-2014
  - Number of crashes involving 65 and older road users

*Source: Aging Road Users Strategic Safety Plan, November 2017*

**Field Review Responsibilities**

- For the Walking Field Visit:
  - Evaluate all roadway and roadside features, design elements and local conditions (glare, night visibility, adjacent land uses) that would increase the likelihood and severity of a crash
  - Observe how road users are interacting with the road facility
  - Determine if the needs of all road users have been adequately and safely met
  - Observe physical evidence of past crashes and off-road excursions
  - Record flashing don’t walk timings for crosswalks
  - Recording yellow/all-red clearance intervals for each vehicular movement

- For the Nighttime Field Visit:
  - Drive the study area
  - Observe lighting, retroreflectivity of signs, and pavement marking conditions
Field Review Responsibilities – Mid-Day Review

- Wear your safety vest!
- Everyone should take as many notes and pictures as they can!

- Divide into two teams:
  - **Team A will observe:**
    - W 12th Ave from W 42nd St to W 50th Pl
  - **Team B will observe:**
    - SR 932 / W 49th St from east of W 14th Ln to west of W 10th Ave
    - W 49th Pl from W 13th Ln to W 12th Ln

Team Field Assignments – Mid-Day Review
**Field Review Responsibilities – PM Peak Review**

- Wear your safety vest!
- Everyone should take as many notes and pictures as they can!

  - Divide into two teams:
    - **Team A will observe:**
      - W 44th Pl from W 15th Ave to west of W 10th Ct
      - W 14th Ave from W 44th Pl to W 42nd Pl
    - **Team B will observe:**
      - W 46th St from rear Home Depot Entrance to W 12th Ave
      - W 47th Pl from W 13th Ln to W 12th Ave

**Team Field Assignments – PM Peak Review**

[Map of the area with marked routes for Team A and Team B]
Road Safety Audit Overview

MIAMI-DADE TRANSPORTATION PLANNING ORGANIZATION

Hialeah Residences and Vivian Villas RSA | June 26, 2019

Agenda

- Schedule
- Historical Crash Review
- RSA Process
- RSA Responsibilities
Today’s Schedule

Community Meeting

• What is a Road Safety Audit?
• Hialeah Residences and Vivian Villas study area historical crash review
• Request input from community for potential improvements

Mid-Day Field Visit (12:30 – 2:30 PM)
PM Peak Field Visit (4:00 – 6:00 PM)
Debrief on Field Observations – Hialeah Residences (6:15 – 7:15 PM)
• Discuss safety issues observed during field review
• Summarize and record observations by intersection and segment
• Discuss and record potential improvements/countermeasures

Nighttime Field Visit
Basic Concepts

- What is a Road Safety Audit (RSA)?
- Why do we need RSAs?
- When do we conduct RSAs?

What is a Road Safety Audit?

A road safety audit is a formal safety performance examination of an existing or future road or intersection by an independent audit team.
### What is a Road Safety Audit?

**formal:** procedures and documentation  
**safety performance:** focus on safety  
**independent:** auditors detached from project team  
**audit team:** “Multi-disciplinary Team” Highway safety and traffic operations professionals, Law enforcement, Transit Agencies, Maintenance, Community stakeholders

### A Road Safety Audit ...  
- Considers the safety of *All Road Users*  
- Examines the interaction of road users and roadway elements  
- Identifies safety issues  
- Proactively considers and recommends mitigation measures
Why do we need RSAs?

Typical Reported Crash Causes

- Human Factors (93%)
- Road Environment Factors (34%)
- Vehicle Factors (13%)

Source: HSM Chapter 3 Figure 3-3

- Relatively few road-related safety issues are identified in collision reports.
- Road designs should anticipate and accommodate road user behaviors (driver/pedestrian/bicycle/transit).
- Easier to design and build safer roads than to modify some entrenched driver/pedestrian/bicycle and transit rider behaviors.
There are many competing interests in the project implementation process:

- Safety, Cost, Environment, Capacity, Accommodation of Users, etc.

Safety is an explicit consideration in the project implementation process; safety must not “fall through the cracks”.

RSAs identify **opportunities to improve safety.**
Hialeah Residences & Vivian Villas

Study Area Crash Statistics

- 1,779 total crashes between 2014 and 2018
  - 1 fatal, 174 injury, 1,604 PDO
  - 13 bicyclist and 32 pedestrian
- Higher crashes observed in December and August
- Higher crashes observed on Friday & with Mid-Day and PM peaks

**Crashes by Year and Severity**

**Crashes by Hour of Day and Severity**

---

Hialeah Residences & Vivian Villas

Study Area Crash Statistics

- 463 rear-end (26%), 304 angle (17%), and 227 sideswipe (13%)
- 21% of crashes in non-daylight conditions
  - 0.3% of crashes were drug or alcohol involved

**Crashes by Type and Severity**

**Crashes by Lighting Condition and Severity**
Hialeah Residences & Vivian Villas

Miami-Dade TPO figure 6
Crashes with Elderly Road Users

- Elderly Crashes
- Pedestrian Involved Crashes
- Bicycle-involved Crashes
- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Rides
- Study Area

Study Area Statistics of Elderly Crashes

- 441 total crashes between 2014 and 2018
  - 1 fatality, 50 injury, 284 PDO
  - 1 bike and 15 pedestrian

- Higher crashes observed in July and November
- Higher crashes observed on Friday & with Mid-Day peak
Hialeah Residences & Vivian Villas

Study Area Statistics of Elderly Crashes

- 95 rear-end (22%), 76 angle (17%), and 58 sideswipe (13%)
- 12% of crashes in non-daylight conditions

![Graphs showing Crashes by Type and Severity and Crashes by Lighting Condition and Severity](image)
Hialeah Residences & Vivian Villas

Figure 4: Nighttime Crashes

Figure 5: Fatal & Severe Injury Crashes
Hialeah Residences and Vivian Villas: Signal Timing Observations

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JASMINE
128 SW 22ND AVENUE, MIAMI, FL 33135

CITY OF MIAMI
MIAMI-DADE COUNTY
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Appendix B Transit Ridership
Appendix C Field Material and Presentation
Acronyms

ADA: Americans with Disabilities Act
FDOT: Florida Department of Transportation
MDC: Miami-Dade County
MDT: Miami-Dade Transit
MPH: Miles Per Hour
MUTCD: Manual on Uniform Traffic Control Devices
RSA: Road Safety Audit
TPO: Transportation Planning Organization
Study Area Characteristics

Field Review Dates:
June 26-27, 2019

Participants:
Kevin Walford – Miami-Dade Transportation Planning Organization
Jacques Defrant – Florida Department of Transportation, District 6
Ryan Raghunandan – Florida Department of Transportation, District 6
Irene Soria Cordero – Miami-Dade County Dade Transportation & Public Works
Isabel Kilzi Rovira (Urban Health Solutions/Urban Health Partnerships)
Phillip Haas – Kittelson & Associates, Inc.

Project Characteristics:
Field Review Type: All Users (Senior Residents, Vehicular, Pedestrian, Bicycle, Transit)
Adjacent Land Use: Urban; Commercial, Residential, Institutional, Educational
Typical Posted Speed Limit: 30 MPH
Roadway Classifications: Urban Minor Arterial, Urban Local
One-way road segments along:
• Flagler Street;
• SW 1st Street; and
• SW 5th Street.
Terrain: Flat
Field Review Climatic Conditions: Sunny/Partially Cloudy

Project Limits:
The Miami-Dade County (MDC) Transportation Planning Organization (TPO) has conducted a series of Road Safety Audits (RSAs) at selected assisted living facilities as a result of the November 2017 Aging Road Users Strategic Safety Plan recommendations. This RSA report documents the safety performance examination results of the existing roadway network in the vicinity of Jasmine. The project limits include a one-half mile radius around the Jasmine assisted living facility and are shown in Figure 1. Appendix A provides a detailed summary of the historical crash trends experienced within the study boundaries.
Figures 1
Study Area

Traffic Signal
Flashing School Zone
Flashing Pedestrian Warning
Bus Stops
Bus Routes
Study Area
Parks
Education
Industrial
Institutional
Commercial
Residential
Office
Vacant

Jasmine
Publix Super Market

Miami-Dade TPO

Traffic Signal
Flashing School Zone
Flashing Pedestrian Warning
Bus Stops
Bus Routes
Study Area
Parks
Education
Industrial
Institutional
Commercial
Residential
Office
Vacant

Figure 1
Study Area
Land Use Context:
There is approximately 5.5 miles of roadway within the study area. The land use within the study area is made up mostly of single family and multi-family residential with the Jasmine assisted living facility located by SW 22nd Avenue and SW 2nd Street. There are several commercial and institutional land uses scattered throughout the area including Publix Super Market by SW 22nd Avenue and SW 1st Street and the Miami Police Department by Beacom Boulevard and W Flagler Street. There is a concentration of commercial uses along SW 22nd Avenue as well as Flagler Street. Suggested changes in the study area should consider the varying contexts and address all users (e.g., senior residents, vehicles, pedestrians, bicycles, transit users). Due to varying contexts within the study area, the focus may shift from one mode type to another.

Transit:
There are four Miami-Dade Transit (MDT) routes through the study area; route 22 runs along SW 22nd Avenue and routes 11, 51, and 208 run along West Flagler Street. Appendix B provides a summary of the transit ridership by route.

Road Safety Audit Process:
The RSA process involves multi-disciplinary representatives from various stakeholder groups such as traffic operations, roadway design, safety, transportation planning, transit, and law enforcement. An RSA is typically conducted to identify potential safety issues and provide improvement suggestions in a collaborative team environment. The November 2017, MDC TPO Aging Road Users Strategic Safety Plan recommends RSAs to be conducted for the top tier locations. This RSA was commissioned through the FY2019/2020 Unified Planning Work Program to develop short-term maintenance, near-term project, and long-term project suggestions to improve safety for all transportation users. This study is intended to identify engineering, education, and enforcement improvements to be considered by MDC TPO staff and partner agencies (e.g., City of Miami, Miami-Dade County, FDOT, Miami-Dade Transportation & Public Works). Some improvements presented in this report may be implemented in the short-term while other suggested improvements will require further evaluation prior to implementation. Each engineering improvement identified in this study is classified into one of three categories:

- **Short-Term or Maintenance Project** – it is anticipated that issues identified for maintenance may be addressed on a short timeframe and at a relatively low cost.
- **Near-Term Project** – activities that may be incorporated into an upcoming construction project in the area, including milling and resurfacing projects, or programmed separately through a pushbutton contract.
- **Long-Term Project** – activities that may be incorporated into upcoming construction projects or may need to be programmed for funding as separate projects and need further evaluation.

The field review was conducted on Wednesday and Thursday, June 26-27, 2019. On Wednesday, the team conducted the night field review of the study area. On Thursday, a walking assessment was conducted during the midday peak, followed by the PM peak review and a meeting with the RSA Team at the end of the walking assessment to discuss suggestions for potential improvements. Appendix C provides a copy of the material shared with the RSA Team in preparation for the field review.

The issues and suggested improvements reflect the consensus of the safety assessment team and not necessarily that of the MDC TPO.
Field Review Findings

Location: STUDY AREA-WIDE
This section includes general recommendations throughout the study-area. For specific location recommendations, see the location specific issues in the following section.

Issue #1: Vehicular Speed

Description of Issue:
Posted speeds are 30 MPH for the study area. Based on visual observation, speeds appear to routinely exceed 30 MPH on West Flagler Street and SW 22nd Avenue.

Suggestions for Improvement:
- Near-Term Project – Identify resources to enforce posted speeds; consider investigating state or federal grants to provide speed enforcement.
- Long-Term Project – Conduct a study to determine if travel lanes can be narrowed through resurfacing projects to reduce speeds.
Issue #2: Pedestrian Crossings

Description of Issue:
Crosswalk pavement markings on major and minor streets throughout the study area are missing or faded.

Suggestions for Improvement:
- Short-Term or Maintenance Project – Restripe intersection crosswalks where faded.
- Near-Term Project – Add crosswalks at signalized and stop controlled intersection approaches where they are currently missing. These crosswalks are intended to improve pedestrian safety by facilitating pedestrian crossings at designated locations.
Issue #3: Roadway Lighting

Description of Issue:
Lighting levels throughout the study area were inconsistent. Lighting levels were low along some corridors and/or at intersections, with the exceptions of Beacom Boulevard, West Flagler Street, SW 22nd Avenue north of SW 3rd Street, and SW 1st Street west of SW 22nd Avenue.

In addition, many stop signs in the study were not retroreflective.

Suggestions for Improvement:
- Near-Term or Long-Term Projects – Lighting and sign reflectivity assessment studies are needed throughout the study area. Lighting alternatives with lower level light poles or pedestrian level lighting should be considered. When modifying intersections, upgrade lighting at intersections to match current FDOT intersection lighting standards.
Issue #4: Nighttime Issues

Description of Issue:
Lighting Issues –
- SW 1st Street and SW 22nd Avenue has a burnt-out light on the northeast corner
- SW 1st Street and SW 22nd Avenue is missing a light on the southwest corner
- West Flagler Street east of SW 22nd Avenue at the RRFB has a burnt-out light on the south side
- West Flagler Street and SW 22nd Avenue has a burnt-out light on the northeast corner
- West Flagler Street and SW 22nd Avenue has a burnt-out light on the south side of the west leg
- West Flagler Street is not lit on the north side of the road west of SW 22nd Avenue
- West Flagler Terrace and SW 23rd Avenue has a burnt-out light on the northeast corner
- SW 2nd Terrace has a burnt-out light on the south side
- SW 4th Street between SW 21st Avenue and SW 19th Avenue has two burnt out lights

Pavement Marking Issues –
- Beacom Boulevard has faded lane markings that are not clearly visible at night

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Conduct maintenance efforts to replace burnt out lights and replace signs that are damaged or have poor retroreflectivity.
- Near-Term Project –
  Restripe lane pavement markings on Beacom Boulevard.
- Long-Term Projects –
  Conduct lighting study to determine if additional lighting is needed.
SPECIFIC LOCATION ISSUES
The following section will include recommendations at specific locations within the study area.

Location: **SW 22nd Avenue and SW 3rd Street Intersection**

Issue #5: Pedestrian Facility

*Description of Issue:*
The pedestrian curb ramp by the southwest corner of SW 22nd Avenue and SW 3rd Street leads pedestrians into the street and does not face the crosswalk.

*Suggestions for Improvement:*
- Near-Term Projects –
  Re-orient curb ramp to lead into the crosswalk and install truncated dome surface.
Location: SW 22nd Avenue and SW 3rd Street Intersection

Issue #6: Pedestrian Facility

Description of Issue:
There are no marked east-west pedestrian crossings along SW 22nd Avenue between SW 1st Street and SW 6th Street (approximately 0.3 miles).

Suggestions for Improvement:
- Long-Term Projects –
  Conduct a study to evaluate the need for a designated mid-block pedestrian crossing within the study area.
Location: **WEST SIDE OF SW 22**\(^{nd}\) **AVENUE NORTH OF SW 6**\(^{th}\) **STREET**

**Issue #7: Pedestrian Facility**

![Image of sidewalk and street scene]

**Description of Issue:**
With the construction of the multi-story residential building on the west side of SW 22\(^{nd}\) Avenue just north of SW 6\(^{th}\) Street, there are several former driveways that require unnecessary undulation on the sidewalk surface to pedestrians and bicyclists.

**Suggestions for Improvement:**
- **Near-Term Project** –
  Reconstruct sidewalk to remove unnecessary driveway ramps and level the sidewalk grade.
Location: SW 22<sup>nd</sup> Avenue and SW 6<sup>th</sup> Street Intersection

Issue #8: Pedestrian Facility

Description of Issue:
The crosswalk on the west side of SW 22<sup>nd</sup> Avenue, crossing SW 6<sup>th</sup> Street does not have truncated domes at both ends and stop bar/crosswalk pavement markings are worn out / faded.

Suggestions for Improvement:
- Near-Term Project –
  Install truncated domes. Re-paint the crosswalks and stop bars at the intersection.
Location: **SW 22\textsuperscript{nd} Avenue and SW 1\textsuperscript{st} Street Intersection**

**Issue #9: Pedestrian Facility**

![Image of the intersection](image)

**Description of Issue:**
Intersection is missing a pedestrian crossing signal on the northeast corner of SW 22\textsuperscript{nd} Avenue and SW 3\textsuperscript{rd} Street, facing northbound pedestrians.

**Suggestions for Improvement:**
- Near-Term Project –
  Install a pedestrian crossing signal that faces southbound across SW 1\textsuperscript{st} Street.
Location: **NW 21st Avenue and NW Flagler Terrace Intersection**

**Issue #10: Traffic Control**

**Description of Issue:**
At NW Flagler Terrace and NW 21st Avenue, vehicles were observed stopping on the northbound and southbound approaches, which are uncontrolled approaches. Vehicles parked near the corners of the intersection obstruct line of sight.

**Suggestions for Improvement:**
- **Long-Term Project –**
  Conduct a study to determine if the intersection should be converted to all-way stop control.
Location: **NW 21st Avenue and NW Flagler Terrace Intersection**

Issue #11: Pedestrian Facility

**Description of Issue:**
The intersection is missing crosswalks the east and west legs of the intersection. All four corners of the intersection have high curb with no transition for pedestrians or wheelchairs to transition from the sidewalks to the street. The sight distance on the southbound approach is obstructed due to a fence with vegetation on the northeast corner.

**Suggestions for Improvement:**
- Near-Term Project –
  Install curb ramps all four corners with truncated domes and provide crosswalks running parallel to NW Flagler Terrace.
  Consider adding bulb-outs at the intersection to reduce the pedestrian crossing distance and increase pedestrian visibility.
Location: SW 22\textsuperscript{nd} Avenue and SW 2\textsuperscript{nd} Street Intersection

Issue #12: Pedestrian Facility

Description of Issue:
The Jasmine assisted living facility is under construction on the northwest corner of SW 22\textsuperscript{nd} Avenue and SW 2\textsuperscript{nd} Street. The main development entrance is along SW 2\textsuperscript{nd} Street, on the south side of the building. The potential safety issue at this intersection is the latent demand that Jasmine residents will create to cross SW 22\textsuperscript{nd} Avenue to access Publix on the east side. It is unlikely residents will walk north to the SW 22\textsuperscript{nd} Avenue and SW 1\textsuperscript{st} Street intersection to cross at the signal and then head back south again to the Publix entrance on SW 22\textsuperscript{nd} Avenue, south of SW 2\textsuperscript{nd} Street. Residents will likely cross SW 22\textsuperscript{nd} Avenue diagonally to/from the Publix entrance by SW 2\textsuperscript{nd} Street. Pedestrians were observed performing this walking route.

Suggestions for Improvement:
- Long-Term Projects –
  Conduct a study to evaluate the need for a designated mid-block pedestrian crossing near SW 2\textsuperscript{nd} Street.
Location: **West Flagler Street between SW 22nd Avenue and SW 20th Avenue**

**Issue #13: Pedestrian Facility**

**Description of Issue:**
There is a midblock crossing immediately east of NW 21st Avenue to cross West Flagler Street which is equipped with rectangular rapid flashing beacons (RRFBs) on both sides of the crosswalk; however, vehicles are not compliant when pedestrians activate the RRFBs. In addition, there is a bus and trolley stop and Family Dollar Store east of the midblock crossing near SW 20th Avenue where pedestrians were observed crossing.

**Suggestions for Improvement:**
- **Long-Term Project** –
  Conduct a study to determine if the pedestrian crossing should be relocated or modified.
Location: SW 22\textsuperscript{nd} Avenue / Beacom Boulevard and West Flagler Street Intersection

Issue #14: Signal Timing

Description of Issue:
Westbound traffic on West Flagler Street making a slight left onto Beacom Boulevard has a green light during the same time that the pedestrian signal instructs pedestrian to walk on the Beacom Boulevard leg. Conflicts between pedestrians and westbound left turning vehicles onto Beacom Boulevard were observed.

Suggestions for Improvement:
- Long-Term Project –
  Conduct a study to determine if intersection improvements are needed to raise awareness in drivers of pedestrians crossing Beacom Boulevard and inform vehicles to yield the right-of-way. Improvements could include additional signage, median extension, or crosswalk realignment for increased visibility.
Location: **SW 22\textsuperscript{nd} Avenue / Beacom Boulevard and West Flagler Street Intersection**

**Issue #15: Pedestrian Crossing**

**Description of Issue:**
There is no marked pedestrian crosswalk on the southwest leg of the SW 22\textsuperscript{nd} Avenue / Beacom Boulevard and West Flagler Street intersection. The northbound traffic on Beacom Boulevard are forced to turn right to head southbound on SW 22\textsuperscript{nd} Avenue. However, the approach has no traffic control device and conflicts with potential pedestrian patterns encourage by the curb ramps adjacent to the movement.

**Suggestions for Improvement:**
- **Near-Term Project** – Install a stop sign at the Beacom Boulevard northbound approach where it intersects with SW 22\textsuperscript{nd} Avenue. In addition, install a marked pedestrian crosswalk on this intersection leg.
Location: **SW 22<sup>nd</sup> Avenue / Beacom Boulevard and West Flagler Street Intersection**

**Issue #16: Pedestrian Crossing**

![Image of SW 22<sup>nd</sup> Avenue / Beacom Boulevard and West Flagler Street Intersection]

**Description of Issue:**
There is no crosswalk across the west leg of the intersection. Pedestrians wanting to travel south to Beacom Boulevard must cross Flagler Street on the east side of the intersection and then cross SW 22<sup>nd</sup> Avenue.

**Suggestions for Improvement:**
- Near-Term Project –
  Install a marked pedestrian crosswalk on the west leg of SW 22<sup>nd</sup> Avenue / Beacom Boulevard and West Flagler Street.
Location: SW 22nd Avenue / Beacom Boulevard and West Flagler Street Intersection

Issue #17: Lane Geometry and Signing

Description of Issue:
The intersection of Flagler Street and SW 22nd Avenue and Beacom Boulevard is a confusing geometry for drivers. Unfamiliar drivers may not perceive and comprehend the left turn options until they are within the intersection. This may be influencing the high number of crashes at the intersection.

Suggestions for Improvement:
- Long-Term Project –
  Conduct intersection study to determine if intersection geometry or signing can be improved to increase safety for all roadway users.
Location: **SW 23rd Avenue and West Flagler Street Intersection**

**Issue #18: Pedestrian Facility**

**Description of Issue:**
There are two medical centers on the north side of West Flagler Street in the vicinity of the SW 23rd Avenue intersection and a supermarket on the southeast corner of the intersection. A marked pedestrian crossing with RRFBs is provided on the east leg of the intersection; however, vehicles were observed to neglect stopping for pedestrians during the flashing RRFBs. Most pedestrians observed at this location were seniors. Pedestrians informed the study team that they do not press the push button anymore since vehicles do not stop.

**Suggestions for Improvement:**
- **Long-Term Project** –
  Conduct a study to determine if the pedestrian crossing on the east leg should be modified to a full signal.
Location: **SW 24th Avenue and West Flagler Street Intersection**

**Issue #19: Pedestrian Facility**

*Description of Issue:*
The pedestrian signal heads for the east-west pedestrian crossings are not showing a WALK interval.

*Suggestions for Improvement:*
- **Short-Term or Maintenance Project** – Conduct maintenance on the pedestrian signals and program WALK time in the controller.
Location: **SW 23rd Avenue and Beacom Boulevard Intersection**

**Issue #20: Pedestrian Facility**

**Description of Issue:**
There are no marked pedestrian crossings along Beacom Boulevard between SW 1st Street and SW 6th Street (approximately 0.4 miles) with at least four bus stops along this segment. At the SW 23rd Avenue intersection, multiple residents were observed walking from the neighborhood southeast of Beacom Boulevard to the supermarket on West Flagler Street. The bus stop on the southeast corner of the SW 23rd Avenue and Beacom Boulevard was observed to be active during the field observations.

**Suggestions for Improvement:**
- **Long-Term Project** –
  Conduct a study to evaluate the feasibility of an alternative intersection design (e.g., roundabout) at Beacom Boulevard/SW 2nd Street/SW 23rd Avenue. In addition, evaluate the need for traffic calming measures along Beacom Boulevard.
Location: SW 20TH AVENUE AND WEST FLAGLER STREET INTERSECTION

Issue #21: Pedestrian Facility

Description of Issue:
Pedestrian warning signs facing westbound traffic on both sides of Flagler Street, west of SW 20th Avenue, are blocked by landscaping.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Conduct maintenance to trim landscaping or potentially relocate behind the signs.
Location: **SW 21st Court and SW 3rd Street Intersection**

Issue #22: Pedestrian Facility

![Image of SW 21st Court and SW 3rd Street intersection]

**Description of Issue:**
Pedestrian crosswalk on the north leg of the SW 21st Court and SW 3rd Street intersection is offset to the north out of the line of sight of oncoming traffic. The offset creates difficulty for pedestrians and vehicles to see each other.

**Suggestions for Improvement:**
- **Near-Term Project** – Relocate pedestrian crosswalk to the south to be in the line of sight of drivers traveling on SW 3rd Street.
Location: **SW 20th Avenue and SW 3rd Street Intersection**

**Issue #23: Pedestrian Facility**

**Description of Issue:**
The sidewalk on the northeast and northwest corners of SW 20th Avenue and SW 3rd Street is narrow making it difficult for pedestrians to maneuver through the sidewalk. The north leg (currently stop-controlled) is missing curb ramps and a marked crosswalk.

**Suggestions for Improvement:**
- Near-Term Project –
  - Install curb ramps with truncated domes and add a crosswalk on the north leg.
Location: **SW 23rd Avenue between SW 5th Street and SW 4th Street**

**Issue #24: Pedestrian Facility**

![Image of sidewalk with tree roots]

**Description of Issue:**
The sidewalk on the east side of SW 23rd Avenue between SW 5th Street and SW 4th Street is uneven due to tree roots.

**Suggestions for Improvement:**
- Near-Term Project –
  Level the sidewalk.
Location: **NW 21st Avenue north of West Flagler Street**

**Issue #25: Pedestrian Facility**

![Image of cracked sidewalk](image)

**Description of Issue:**
The sidewalk along both sides of NW 21st Avenue between West Flagler Street and NW Flagler Terrace is fractured in multiple places.

**Suggestions for Improvement:**
- **Near-Term Project** –
  Repair sidewalk along both sides of NW 21st Avenue.
Location: West Flagler Street west of W 23rd Avenue

Issue #26: Parking

Description of Issue:
Vehicles illegally parked along the north side curb of West Flagler Street west of W 23rd Avenue encroach significantly upon the westbound marked bicycle lane. A bicyclist encountering these parked vehicles might swerve into a through traffic lane in front of trailing vehicles.

Suggestions for Improvement:
- Short-Term or Maintenance Project –
  Install NO PARKING signs (R7-1) along this commercial section according to the MUTCD Section 2B.47.
  Conduct enforcement activities to prevent illegally parked vehicles on the north side of West Flagler Street.
Location: **West Flagler Street and the U-Turn to SW 1st Street**

**Issue #27: Curb Visibility**

![Image of West Flagler Street with curbed landscaped island and leftmost lane marked as exclusive left turn]

**Description of Issue:**
The leftmost lane of West Flagler Street is designated as an exclusive left turn lane as it approaches a triangular island where West Flagler transitions from a one-way to a two-way configuration. There is evidence that vehicles have impacted the nose of the curbed, landscaped island. The maintaining agency has installed yellow raised pavement markers on top of the painted island nose to increase nighttime visibility, which is diminished by a large oak tree within the island.

**Suggestions for Improvement:**
- **Near-Term Project** – Install several chevrons (W1-8) according to the MUTCD Section 2C.09 within the island to enhance driver’s perception of the obstruction and to emphasize the need to turn.
Location: **SW 22\(^{\text{nd}}\) Avenue and SW 3\(^{\text{rd}}\) Street Intersection**

**Issue #28: Pedestrian Facility**

Description of Issue:
The crosswalk and stop bar pavement markings on the east leg of SW 22\(^{\text{nd}}\) Avenue and SW 3\(^{\text{rd}}\) Street are worn out. In addition, half of the westbound lane has been repaved and no longer shows the pavement markings.

Suggestions for Improvement:
- **Short-Term or Maintenance Project** –
  Refurbish the pavement markings on the crosswalk and stop bar on the east leg of the intersection.
Location: **SW 23rd Avenue and SW 1st Street Intersection**

**Issue #29: Pedestrian Facility**

**Description of Issue:**
Eastbound traffic on the original alignment of SW 1st Street may make right turns onto SW 23rd Avenue from a short, one-way section controlled by a STOP sign. While a driver making this turn can clearly see a vehicle travelling southbound on SW 23rd Avenue, that driver would not be aware of a right turning vehicle approaching from SW 1st Street. Also, there are an uncontrolled, marked crosswalks on both legs of the realigned SW 1st Street at the intersection.

**Suggestions for Improvement:**
- **Short-Term or Maintenance Project** –
  Replace the standard crosswalk pavement markings on the north and south legs with high emphasis crosswalk pavement markings.
  Install Yield Here To Pedestrians signs (R1-5) per MUTCD Section 2B.11 and yield lines per MUTCD Section 3B.15 in advance of the marked crosswalks for eastbound traffic on SW 1st Street.
- **Long-Term Project** –
  Conduct an intersection study to determine if the right turn access onto SW 23rd Avenue from SW 1st Street should be closed or reconfigured for improved visibility of oncoming or turning traffic. Also, evaluate the need for all-way stop controlled intersection.
Summary of Suggestions

This assessment considers operational and safety related issues for all users near Jasmine assisted living facility. This study was commissioned by MDC TPO to develop recommendations to improve the safety of all users throughout the study area. The suggestions identified in this report are summarized as follows:

**Improvements:**
Each suggestion identified in this study is classified into one of three categories:

- **Short-Term or Maintenance Project** – it is anticipated that issues identified for maintenance may be addressed by public agency staff on a short timeframe and at a relatively low cost.
- **Near-Term Project** – activities that may be incorporated into an upcoming construction project in the area, including milling and resurfacing projects, or programmed separately through a pushbutton design-build contract.
- **Long-Term Project** – activities that may be incorporated into upcoming construction projects or may need to be programmed for funding as separate projects.

**Education:**
Potential corridor-focused education efforts are noted below:

- Educate Bicyclists: Warn bicyclists of the risks associated with riding on the sidewalk against the flow of traffic
- Educate Bicyclists: Educate bicyclists regarding best practices for nighttime riding and provide resources (e.g., bike lights, reflectors, wear bright or retroreflective clothing)
- Educate Motorists: Yield to pedestrians in crosswalks
- Educate Motorists: Watch for pedestrians and bicyclists at driveways (look both ways)
- Educate Pedestrians: Use of designated crosswalks and use of pedestrian signals
- Educate Pedestrians: Educate pedestrians regarding being visible at night

**Enforcement:**
Potential corridor-focused enforcement efforts are noted below:

- Motorists: Consider investigating state or federal grants to increase speed enforcement in areas with high volumes of transit users, pedestrians, and bicycles.
  - Illegally parked vehicles were observed to be a recurring behavior which creates a safety concern for bicyclists in the area.

The issues and suggested improvements reflect the consensus of the safety assessment team and not necessarily that of the MDC TPO.

The following table lists each issue identified within the study area as well as its categorized improvement type.
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Appendix A
Historical Crash Summary
Senior Living Facilities
Road Safety Audit

Jasmine Senior Living
City of Miami

Background

The Senior Living Facilities Road Safety Audit focused on the area surrounding Jasmine Senior Living Facilities includes several corridors as follows that were identified as focus areas based on their crash history:

- W Flagler St from 24th Ave to east of SW 20th Ave – 0.46 miles
- SW 1st St from NW 24th Ave to east of SW 20th Ave – 0.47 miles
- Beacon Blvd from east of SW 24th Ave to Flagler St – 0.35 miles
- SW 22nd Ave from north of SW 6th St to NW 1st Ter – 0.49 miles
- SW 23rd Ave from SW 5th St to NW 1st St – 0.43 miles

The general segment characteristics for the area are reviewed below:

- SW 1st St (eastbound) and W Flagler St (westbound) function as a one-way pair through the study area.
- SW 22nd Ave is a 4-lane divided roadway, Beacon Blvd is a 4-lane undivided roadway, and the majority of the roads in residential areas a two-lane roads with no marked centerline.
- Posted speed limits of 30 mph on SW 1st Ave, 35 mph on Beacon Blvd, with remaining roadways through residential areas generally unsigned.
- There are no marked bicycle facilities.
- There are continuous sidewalks on both sides of the roadways throughout the majority of the study area.
- Overhead street lighting is present at some intersections and sporadic along segments.
- Curb and gutter is present throughout most of the study area.
- The land use is primarily commercial along Flagler St, SW 1st Ave, and SW 22nd Ave, with single-family and multi-family residential throughout the remainder of the study area. Miami Senior High School is located along the western edge of the study area.
- This area is served by bus routes 207 and 208 along Beacon Blvd, route 11 along W Flagler St, route 22 along SW 22nd Ave, and routes 11 and 207 along SW 1st Ave.
- There are four (4) signalized intersections throughout the study area:
  - W Flagler St/SW 1st Ave and 24th Ave
    - Special emphasis crosswalk markings
  - W Flagler St and SW 22nd Ave and Beacon Blvd
    - Standard crosswalk markings
  - SW 1st St and Beacon Blvd
    - Standard crosswalk markings, special emphasis on east leg
  - SW 1st St and SW 22nd Ave
    - Standard crosswalk markings
Crash History (2014 – 2018):

Five (5) years of available vehicular crash data, 2014 to 2018, was obtained from the Signal Four Analytics database and utilized for historical crash analysis.

Overall Study Area

A total of 936 vehicular crashes were reported over the five-year study period. Of the 936 crashes reported during the study period, there were zero fatal crashes, 134 injury crashes (14 percent), and 802 property damage only (PDO) crashes (86 percent). There were 9 bicycle involved crashes (1 percent) and 23 pedestrian involved crashes (2 percent):

The reported crashes are displayed by different measures of time (year, month, day, and hour) below. Overall, the number of crashes has decreased between 2014 and 2018. March (102 crashes) and November (87 crashes) were the highest crash months during the year, while crashes were generally consistent throughout weekdays (137 to 148 crashes per weekday) and lower on weekends (especially Sunday). Seventy-four (77) percent of all crashes occurred between 7:00 AM and 7:00 PM.

The reported crashes by crash type are displayed below. Twenty-six (26) percent (247 crashes) angle crashes, twenty-three (23) percent (212 crashes) were rear end crashes, and nineteen (19) percent (181 crashes) were sideswipe crashes. Twenty-four (24) percent of crashes occurred under non-daylight conditions.
Among the crashes that occurred during non-daylight conditions, general trends are somewhat similar to those presented for all crashes in the study area. Total non-daylight crashes decrease from 2014 to 2018. Angle, rear end, and sideswipe remain the predominant crash types. Non-daylight crashes occur more heavily on Saturdays (55 crashes, 24 percent). Eight-four (84) percent of the non-daylight crashes were PDO crashes and 14 percent were injury crashes.

A total of 203 crashes in the study area involved elderly users, with 81 percent PDO crashes, 19 percent injury crashes, and zero fatal crashes. These crashes primarily occurred between 7am and 7pm (88 percent) and were more frequently occurring on Monday, Thursday and Friday, with the lowest number of crashes occurring on Sunday (11 crashes, 7 percent). The most prevalent crash types included angle (29 percent), sideswipe (19 percent), and rear end (13 percent).

Further details on crashes located within the five previously identified high-crash corridors in the study area are provided below.

**W Flagler St from 24th Ave to east of SW 20th Ave (334 total crashes)**
- 16 percent (53 crashes) were injury-related, and 84 percent (282 crashes) were PDO.
- 30 percent (100 crashes) were classified as “other” crash type, 26 percent (86 crashes) were rear end, and 19 percent (62 crashes) were sideswipe.
- 25 percent (84 crashes) occurred in non-daylight conditions.
- 31 percent (102 crashes) occurred between 2:00 PM and 6:00 PM.
- 10 crashes were pedestrian involved and 3 crashes were bicyclist involved.
- 5 crashes were alcohol or drug related.
SW 1st St from NW 24th Ave to east of SW 20th Ave (274 total crashes)
- 18 percent (50 crashes) were injury-related, and 82 percent (224 crashes) were PDO.
- 24 percent (65 crashes) were angle, 21 percent (58 crashes) were classified as “other”, and 20 percent (56 crashes) were rear end.
- 25 percent (67 crashes) occurred in non-daylight conditions.
- 28 percent (76 crashes) occurred between 9:00 AM and 1:00 PM.
- 7 crashes were pedestrian involved and 2 crashes were bicyclist involved.
- 2 crashes were alcohol or drug related.

Beacon Blvd from east of SW 24th Ave to Flagler St (227 total crashes)
- 15 percent (34 crashes) were injury-related, and 85 percent (193 crashes) were PDO.
- 28 percent (63 crashes) were rear end, 23 percent (52 crashes) were classified as “other”, and 19 percent (43 crashes) were angle crashes.
- 22 percent (49 crashes) occurred in non-daylight conditions.
- 35 percent (62 crashes) occurred between 11:00 AM and 3:00 PM.
- 2 crashes were pedestrian involved and 0 crashes were bicyclist involved.
- 2 crashes were alcohol or drug involved.
SW 22nd Ave from north of SW 6th St to NW 1st Ter (290 total crashes)

- 16 percent (47 crashes) were injury, and 84 percent (243 crashes) were PDO.
- 30 percent (86 crashes) were rear end, 18 percent (52 crashes) were classified as “other”, and 17 percent (49 crashes) were sideswipe.
- 25 percent (73 crashes) occurred in non-daylight conditions.
- 30 percent (88 crashes) occurred between 11:00 AM and 3:00 PM.
- 5 crashes were pedestrian involved and 4 crashes were bicyclist involved.
- 5 crashes were alcohol or drug involved.

SW 23rd Ave from SW 5th St to NW 1st St (154 total crashes)

- 14 percent (22 crashes) were injury-related, and 86 percent (132 crashes) were PDO.
- 36 percent (56 crashes) were angle, 25 percent (38 crashes) were classified as “other”, and 12 percent (19 crashes) were rear end.
- 21 percent (32 crashes) occurred in non-daylight conditions.
- 38 percent (59 crashes) occurred between 2:00 PM and 6:00 PM.
- 6 crashes were pedestrian involved and 1 crash was bicyclist involved.
- 1 crash was alcohol or drug involved.
Miami-Dade TPO

Figure 1
Study Area

Traffic Signal
Flashing School Zone
Flashing Pedestrian Warning
Bus Stops
Bus Routes
Study Area
Parks
Education
Industrial
Institutional
Commercial
Residential
Office
Vacant

Figure 1
Study Area

0 200 400 600 Feet
Figure 2
Crash Frequency
Figure 3
Bicycle & Pedestrian Crashes

Data Source: Signal 4 Analytics (2014-2018)
Miami-Dade TPO

Figure 4
Nighttime Crashes

- Nighttime Crashes
- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes
- Study Area

Data Source: Signal 4 Analytics (2014-2018)
Figure 5
Fatal & Severe Injury Crashes

Data Source: Signal 4 Analytics (2014-2018)
Miami-Dade TPO

Figure 6
Crashes with Elderly Road Users

- Elderly Crashes
- Pedestrian Involved Crashes
- Bicycle Involved Crashes
- Traffic Signal
- Flashing School Zone
- Flashing Pedestrian Warning
- Bus Stops
- Bus Routes
- Study Area

Data Source: Signal 4 Analytics (2014-2018)
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Appendix C
Field Material and Presentation
Schedule

Jasmine Senior Living RSA

Mid-Day Field Review – Jasmine Senior Living (9:30 – 11:30 AM)
PM Peak Field Visit (1:00 PM – 3:00 PM)
Debrief on Field Observations – Jasmine Senior Living (3:15 PM – 4:15 PM)
  • Discuss safety issues observed during field review
  • Summarize and record observations by intersection and segment
  • Discuss and record potential improvements/countermeasures

Jasmine Senior Living
2222 SW 1st St
Miami, FL 33135
Field Review Responsibilities – Mid-Day Review

- Wear your safety vest!
- Everyone should take as many notes and pictures as they can!

- Divide into two teams:
  - **Team A will observe:**
    - W Flagler St from 24th Ave to SW 20th Ave
    - NW 21st Ave from Flagler St to NW Flagler Ter
  - **Team B will observe:**
    - SW 22nd Ave from north of SW 6th St to NW 1st Ter
    - NW Flagler Ter from NW 22nd Ave to NW 21st Ave

Team Field Assignments – Mid-Day Review
Field Review Responsibilities – PM Peak Review

- Wear your safety vest!
- Everyone should take as many notes and pictures as they can!

- Divide into two teams:
  - **Team A will observe:**
    - SW 23rd Ave from SW 5th St to NW 1st St
    - SW 3rd St from SW 22nd Ave to SW 20th Ave
  - **Team B will observe:**
    - Beacon Blvd from south of SW 3rd St to W Flagler St
    - SW 1st St from SW 22nd Ave to SW 19th Ave

Team Field Assignments – PM Peak Review
### Jasmine: Signal Timing Observations

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