Data Dictionary

November 2019
# Table of Contents

1. **Purpose** .......................................................................................................................... 1

2. **Data Layers** ................................................................................................................... 2

   - Points of Interest ........................................................................................................... 2
   - Schools .......................................................................................................................... 3
   - Pedestrian/Bicycle Counts .......................................................................................... 3
   - Pedestrian/Bicycle Crashes 2014 – 2018 ...................................................................... 4
   - Pedestrian Facilities & Gap ......................................................................................... 6
   - Bicycle Facilities ......................................................................................................... 7
   - US Bicycle Route (USBR) System ................................................................................ 8
   - Existing & Future Pedestrian/Bicycle Demand .......................................................... 9
   - Pedestrian/Bicycle Level of Service (LOS) ................................................................. 11
   - Strava Bicycling and Running Data 2016 ................................................................. 13
   - Trails ............................................................................................................................ 14
   - Transit Systems .......................................................................................................... 16
   - Roadway Lighting ....................................................................................................... 19
   - Adopted 5-Year Work Program ................................................................................ 20
   - Environmental ............................................................................................................ 20
   - Composite Underserved Population Concentration ................................................ 23
   - Land Use, Population, Employment .......................................................................... 24
   - Base Data .................................................................................................................... 27

3. **Sidewalk Gap Prioritization** ....................................................................................... 31

   - Safety and Security ..................................................................................................... 34
   - Agile, Resilient and Quality ....................................................................................... 34
   - Efficient and Reliable Mobility for People and Freight ............................................. 35
   - More Transportation Choices for People and Freight ................................................ 36
   - Transportation Solutions supporting Florida’s Global Economic Competitiveness (Economic Competitiveness) .............................................................................. 37
   - Transportation Solutions supporting Quality Places to Live, Learn, Work, and Play (Quality Places) ........................................................................................................... 38
   - Transportation Solutions enhancing Florida’s Environment and Conserve Energy (Environment & Conservation) ........................................................................................................ 40
Tables

Table 1: Points of Interests in District Five .................................................................................. 3
Table 2: District Five Bicycle & Pedestrian Counts, 1997-2018 .................................................. 4
Table 3: District Five Bicycle & Pedestrian Crash Counts, 2014-2018 ........................................ 5
Table 4: Composite Underserved Population Criteria ............................................................... 23
Table 5: Sidewalk Gap Prioritization Formula ........................................................................... 32
Table 6: Safety & Security Criteria Values ................................................................................ 34
Table 7: Agile, Resilient, and Quality Criteria Values ................................................................ 35
Table 8: Pedestrian Demand Criteria Values ............................................................................ 35
Table 9: Means of Transportation to Work Criteria Values ....................................................... 36
Table 10: Distance to Other Transportation Criteria Values ...................................................... 37
Table 11: Underserved Population Criteria Values ................................................................... 37
Table 12: Economic Competitiveness Criteria Values .............................................................. 38
Table 13: Quality Places Criteria Values .................................................................................. 39
Table 14: Environment & Conservation Criteria Values ............................................................ 40

Figures

Figure 1: USBRS National Corridor Plan .................................................................................... 9
Figure 2: Bicycle LOS Formula ................................................................................................ 12
Figure 3: Pedestrian LOS Formula ........................................................................................... 12
Figure 3: Wetland Systems ...................................................................................................... 22
Figure 5: Sample Gap Prioritization Report .............................................................................. 33
1. Purpose

The purpose of this data dictionary is to provide the user with information on each of the map layers contained in TransPed and how these layers feed into the prioritization process of the tool. The summary of the map layers provides information on where the data was obtained, a description of each dataset, a list of the attributes in the layer, how often the data should be updated, and other relevant information to help the user understand the information that is being displayed. Some of the data contained in the map layers is used to generate the sidewalk prioritization reports designed to help decision makers and other stakeholders guide investments in sidewalk projects in the District.
2. Data Layers

Within the map legend, there are 18 layer groups that highlight different factors and conditions planners can use to assess bike/ped needs within the study area. All the layer groups, except for two, can be expanded to show specific information/layers within the layer group such as location of bike lanes, transit infrastructure, crash locations, and land use features. In total, over 50 individual data layers may be displayed within TransPed. Many of these layers feed into the Sidewalk Gap prioritization tool, which is discussed in greater detail in a later section of this report. This section summarizes the data layer/layer groups by providing information on the data source, layer attributes, update schedule, and other relevant information.

Points of Interest
This dataset highlights locations of interest within FDOT District Five. These sites are considered to be potential bike/ped trip generators. Locations contained within this dataset include amusement parks, banquet halls and facilities, civic centers, convention centers, medical facilities, parks and sports venues. It is derived from the University of Florida GeoPlan Civic Centers, Stadiums, and Other Large Capacity Facilities in Florida datasets available from the Florida Geographic Data portal. The layer attributes for this dataset include:

1. NAME – The name of the point of interest;
2. TYPE – The type of point of interest (see Table 1);
3. DESCRIP – General description of the point of interest;
4. ADDRESS;
5. CITY;
6. ZIPCODE; and
7. COUNTY – The county where the point of interest is located

There are 2,931 points of interest identified in District Five, divided across 53 unique facility types. Table 1 condenses the facility types into related categories and provides a count for each category within the district.
Table 1: Points of Interests in District Five

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>College/University</td>
<td>131</td>
</tr>
<tr>
<td>Government Facilities</td>
<td>242</td>
</tr>
<tr>
<td>Hospitals</td>
<td>64</td>
</tr>
<tr>
<td>Nature Parks</td>
<td>1,204</td>
</tr>
<tr>
<td>Neighborhood Parks</td>
<td>1,141</td>
</tr>
<tr>
<td>Other</td>
<td>64</td>
</tr>
<tr>
<td>Sports Venues</td>
<td>39</td>
</tr>
<tr>
<td>State Parks &amp; Trails Entrances</td>
<td>46</td>
</tr>
</tbody>
</table>

This dataset is updated annually.

Schools

This dataset provides the name and location of each public, private, and charter school as well as head start centers and other schools facilities located in District Five. There are 926 facilities located within the district with the following breakdown:

- 601 Public Schools
- 247 Private Schools
- 42 Charter Schools
- 36 Other Schools

The layer attributes for this dataset include:

1. School Name;
2. School Type – The type of the school (Charter, Magnet, Private, or Public);
3. Grade Level – The grade level of the school; and
4. School District – The district where the school is located.

This dataset is updated annually.

Pedestrian/Bicycle Counts

The Pedestrian/Bicycle Count dataset contains pedestrian and bicycle counts within the study area. The source of the pedestrian/bicycle counts is from intersection reports from 1997 to 2018 provided by FDOT and digitized into GIS. There are 2,301 counts within the dataset that are divided into 1,133 bicycle counts and 1,168 pedestrian counts. The breakdown of traffic counts by county is provided in Table 2.
Table 2: District Five Bicycle & Pedestrian Counts, 1997-2018

<table>
<thead>
<tr>
<th>County</th>
<th>Bicycle Count</th>
<th>Pedestrian Count</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevard</td>
<td>173</td>
<td>177</td>
<td>350</td>
</tr>
<tr>
<td>Flagler</td>
<td>27</td>
<td>28</td>
<td>55</td>
</tr>
<tr>
<td>Lake</td>
<td>78</td>
<td>79</td>
<td>157</td>
</tr>
<tr>
<td>Marion</td>
<td>77</td>
<td>77</td>
<td>154</td>
</tr>
<tr>
<td>Orange</td>
<td>413</td>
<td>417</td>
<td>830</td>
</tr>
<tr>
<td>Osceola</td>
<td>81</td>
<td>84</td>
<td>165</td>
</tr>
<tr>
<td>Seminole</td>
<td>91</td>
<td>112</td>
<td>203</td>
</tr>
<tr>
<td>Sumter</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Volusia</td>
<td>183</td>
<td>184</td>
<td>367</td>
</tr>
<tr>
<td>Total</td>
<td>1,133</td>
<td>1,168</td>
<td>2,301</td>
</tr>
</tbody>
</table>

The layer attributes for this for the Pedestrian and Bicycle County layers include:

1. **MODE** – Bicycle or Pedestrian;
2. **DIRECTION** – The approaches at the intersection where the counts were taken.
   - Results are either 2-way, 3-way, or all for all approaches;
3. **STREET** – The primary street where the count is taking place;
4. **CROSS STREET** – The nearest cross street/intersecting street to the count location;
5. **MONTH, DAY, YEAR** – The date the count was taken;
6. **PERIOD** – The number of hours the count covers; and
7. **COUNT TOTAL** – The observed value of bicyclists or pedestrians.

This dataset is updated as new counts become available.

**Pedestrian/Bicycle Crashes 2014 – 2018**

This dataset provides the number of bicycle and pedestrian accidents that occurred in FDOT District Five from 2014 to 2018. The source of the [Signal Four Analytics](https://www.signalfour.com) crash database is maintained and provided by the UF GeoPlan Center. Within the district, there were 4,534 reported bicycle accidents and 6,214 pedestrian accidents. The accident breakdown by county and whether they included a fatality and/or an injury is provided in Table 3.
<table>
<thead>
<tr>
<th>County</th>
<th>Bicycle</th>
<th></th>
<th></th>
<th>Pedestrian</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td># Accidents with Fatality</td>
<td># Accidents with Injury</td>
<td>Total</td>
<td># Accidents with Fatality</td>
<td># Accidents with Injury</td>
</tr>
<tr>
<td>Brevard</td>
<td>570</td>
<td>17</td>
<td>441</td>
<td>730</td>
<td>70</td>
<td>560</td>
</tr>
<tr>
<td>Flagler</td>
<td>94</td>
<td>3</td>
<td>81</td>
<td>67</td>
<td>11</td>
<td>49</td>
</tr>
<tr>
<td>Lake</td>
<td>153</td>
<td>5</td>
<td>125</td>
<td>286</td>
<td>38</td>
<td>232</td>
</tr>
<tr>
<td>Marion</td>
<td>244</td>
<td>9</td>
<td>197</td>
<td>513</td>
<td>53</td>
<td>411</td>
</tr>
<tr>
<td>Orange</td>
<td>1,900</td>
<td>34</td>
<td>1,584</td>
<td>2,583</td>
<td>196</td>
<td>2,115</td>
</tr>
<tr>
<td>Osceola</td>
<td>318</td>
<td>10</td>
<td>266</td>
<td>489</td>
<td>55</td>
<td>396</td>
</tr>
<tr>
<td>Seminole</td>
<td>535</td>
<td>13</td>
<td>430</td>
<td>543</td>
<td>37</td>
<td>435</td>
</tr>
<tr>
<td>Sumter</td>
<td>58</td>
<td>0</td>
<td>44</td>
<td>113</td>
<td>8</td>
<td>87</td>
</tr>
<tr>
<td>Volusia</td>
<td>662</td>
<td>17</td>
<td>543</td>
<td>890</td>
<td>87</td>
<td>735</td>
</tr>
<tr>
<td>Total</td>
<td>4,534</td>
<td>108</td>
<td>3,711</td>
<td>6,214</td>
<td>555</td>
<td>5,020</td>
</tr>
</tbody>
</table>

The layer attributes for the Pedestrian/Bicycle Crashes 2014-2018 are as follows:

2. Agency Report Number – Report number from the law enforcement agency submitting the accident long form report;
3. Reporting Agency – Name of the Law Enforcement Agency providing the report;
4. Form Type – all accident reports are the long form;
5. Crash Date & Time;
6. City;
7. County;
8. Crash Street – The street where the accident occurred;
9. Intersecting Street – The name of the closest intersecting street;
10. Offset distance – The distance of the accident from the intersecting street;
11. Offset direction – The direction to the intersecting street;
12. Crash Type – Bicyclist or Pedestrian;
13. Vehicles – The number of motorized vehicles involved;
14. Non-motorized – Any person other than an occupant of a motor vehicle in transport. This includes pedestrians, occupants of other motor vehicles not in transport and occupants of transport vehicles other than motor vehicles;
15. Fatalities – The number of fatalities;
16. Injuries – The number of injuries;
17. Alcohol Related – Whether or not the accident involved the use of alcohol;
18. Distraction Related – Whether or not the accident involved a distracted person;
19. Drug related – Whether or not the accident involved illicit or prescriptive drugs;
20. Estimated Damages – The estimated cash value of the damages to the motorized vehicles, non-motorized vehicles, and/or other property;
21. Weather condition – The prevailing atmospheric conditions that existed at the time of a crash;
22. Light Condition – Whether the accident occurred during the day or at night;
23. Street Number – The street address of the closest building to the accident;
24. Crash Type Detailed – Additional information on the type of accident.
25. Crash Type Direction – The direction of travel for the vehicles/persons involved in the accident;
26. Crash Severity – Whether the accident resulted in an injury, fatality, or no injury;
27. Within City Limits – Whether the accident occurred within an incorporated municipality;
28. First Harmful Event - The injury or damage producing event which characterizes the crash type and identifies the nature of the first harmful event; and
29. Road Surf Condition - The roadway surface condition at the time and place of a crash.

This dataset is to be updated annually or as new reports become available. In the map legend, pedestrian and bicycle crashes from 2014 to 2018 can be displayed as separate variables or in combination with each other.

Pedestrian Facilities & Gap
The Pedestrian Facilities & Gap analysis uses information from the FDOT Roadway Characteristics Inventory (RCI) to provide the information and location of all sidewalk facilities on state roads within FDOT District Five. The dataset is divided into two layers: Sidewalk Gaps and Sidewalk Facilities. The Sidewalk Facilities layer shows whether the sidewalk is located on both sides of the road, on one side only, whether there is no sidewalk present, or if the roadway is a limited access facility. If there is no sidewalk present, it is identified as a gap in the sidewalk coverage; it starts from where there is no sidewalk or only sidewalk on one side and ends where there is a sidewalk on both sides of the road. The Sidewalk Gaps layer classifies the gaps in the Sidewalk Facilities layer as either a partial gap (sidewalk is missing from one side) or full gap (sidewalk is missing from both sides).

The Sidewalk Facilities layer contains the following attributes:

1. SIDEWALK TYPE – Indicates whether the sidewalk is located on both sides of the road, on one side only, whether there is no sidewalk present, or if the roadway is a limited access facility;
2. COUNTY – The county where the road sidewalk is located;
3. STATE ROAD #;
4. ROADWAY ID – RCI segment ID;
5. FROM MP – The starting mile post for the segment;
6. TO MP – The ending mile post for the segment;
7. SEG LENGTH (MI) – The distance in miles of the length of the sidewalk or gap on the road segment. It is calculated by subtracting the TO MP from the FROM MP;
8. GOOGLE STREET VIEW – A link to a street view image of the road segment.
The Sidewalk Gaps layer contains the following attributes:

1. GAP ID COUNTY – If there is a partial or full gap on the road segment, it is assigned a name based on the county it is located in with a three digit identification number;
2. GAP TYPE – Full or partial;
3. COUNTY – The county where the road sidewalk is located;
4. STATE ROAD #;
5. ROADWAY ID – RCI segment ID;
6. FROM MP – The starting mile post for the segment;
7. TO MP – The ending mile post for the segment;
8. GAP LENGTH (MI) – The distance in miles of the length of the sidewalk or gap on the road segment. It is calculated by subtracting the TO MP from the FROM MP;
9. GOOGLE STREET VIEW – A link to a street view image of the road segment.

These datasets should be updated on an annual basis.

Bicycle Facilities
Similar to the Pedestrian Facilities dataset, the Bicycle Facilities layer uses RCI information to identify roadway segments that have a bike lane, bike slot, or a shared path along them. A bike lane is defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. A bike slot is a stripe-separated portion of the roadway, not necessarily marked for bicycles, between a through lane and a right turn lane of an intersection. A shared path is a paved multi-use path located alongside a roadway.

The Bike Lanes layer contains the following attributes:

1. ROADWAY – RCI Segment Number ID;
2. ROAD SIDE – The side of the road where the bike lane is located either right side, left side, or center;
3. DESCRIPTION – Whether or not the bike lane is designated on the road or undesignated;
4. BEGIN MP – The starting milepost for the bike lane; and
5. END MP – Ending milepost for the bike lane.

The Bike Slots layer contains the following attributes:

1. ROADWAY – RCI Segment Number ID;
2. ROAD SIDE – The side of the road where the bike slot is located either right side, left side, or center;
3. DESCRIPTION – Whether or not the bike lane is designated on the road or undesignated;
4. BEGIN MP – The starting milepost for the bike slot; and
5. END MP – The ending milepost for the bike slot.
The Shared Path layer contains the following attributes:

1. ROADWAY – RCI Segment Number ID;
2. ROAD SIDE – The side of the road where the bike slot is located either right side, left side, or center;
3. BEGIN MP – The starting milepost for the bike slot;
4. END MP – The ending milepost for the bike slot; and
5. DIST. FROM ROAD – How far the facility is from the road.

These datasets should be updated annually.

US Bicycle Route (USBR) System
The US Bicycle Route System (USBR) is a developing national network of officially, recognized, numbered, and signed bicycle routes which use existing roads, trails, and other facilities appropriate for bicycle touring.¹ The program began in the 1980s with the American Association of State and Transportation Officials (AASHTO) with the designation of two national bike routes in 1982: US Bicycle Route 1 in Virginia and North Carolina and US Bicycle Route 76 in Virginia, Kentucky, and Illinois.² Due to lack of interest, no new routes were established after these initial ones. AASHTO officially revived the program in 2003 and established a task force for designating the US Bicycle Routes.

To date, 13,536 miles of US Bicycle Routes have been established in 26 states (Figure 1). There are two official routes located in Florida: USBR-1 which runs north/south along the east coast of Florida, and USBR-90 which runs east/west along US 90. Each route can be displayed separately in TransPed. Only USBR-1 is within the study area. USBR-15 is an undeveloped corridor that is proposed to run north/south along the west coast of Florida before crossing the state in Southwest Florida to connect with USBR-1.

¹ https://www.adventurecycling.org/routes-and-maps/us-bicycle-route-system/faqs-for-cyclists/
The US Bicycle Route System layer contains the following attributes:

1. ROUTE – The official USBR Route Name;
2. ROUTE# – The shorthand numerical name of the route;
3. STATUS – Whether the route is officially designated or not;
4. NAME – The name of the roadway facility the bicycle route is using;
5. COMMENTS – Any comments or notes concerning that segment of route; and
6. COUNTY – The name of the county where the segment of the route is located.

This dataset should be updated as a new route in Florida is officially designated.

Existing & Future Pedestrian/Bicycle Demand
The Existing & Future Pedestrian Bicycle Demand layer is based on a dataset created by consultant staff to estimate the current and future non-motorized transportation demand on road segments in the study area. The methodology for calculating the bike/ped demand is based on a variation to the Latent Demand Score (LDS) method.
The LDS method was developed in 1996 by Bruce Landis of Sprinkle Consulting to provide a tool to estimate the potential or latent demand for bicycle travel. The method analyzes the proximity and trip generation potential to determine the bicycle demand for a road segment. LDS uses a gravity model designed to rank road segments based on their proximity to different types of major attractors and the probability that someone will bike a certain distance to those different types of attractors.

For TransPed, the LDS method was modified to also predict pedestrian trips. In addition, the potential for trip activity was evaluated based on characteristics within the surrounding area at the travel analysis zone (TAZ) level for each segment for three trip attraction/generation variables:

1. Population;
2. Employment; and
3. School enrollment.

The TAZs and socioeconomic data for the trip attraction/generation variables were derived from the Central Florida Regional Planning Model (CFRPM). The 2015 socioeconomic data represents the current demand with the 2045 socioeconomic data represents the future demand. The revised methodology consisted of:

1. Creating a ¾ mile buffer around FDOT RCI road segments;
2. Intersect the buffer with the TAZs;
3. Calculate the percentage of TAZs contained within the buffer;
4. Compute the socioeconomic data as a product of the TAZ percentage and the sum of population, employment, and school enrollment; and
5. Aggregate the socioeconomic totals at (vehicle) level of service (LOS) segmentation.

A score of 0 and 100 are assigned to the lowest and highest socioeconomic total, respectively, with the remaining scores calculated proportionally. For display purposes, the scores are consolidated into the following categories:

- Very low (Score 0-1);
- Low (Score 2-10);
- Medium (Score 11-30);
- High (Score 31-40); and
- Very High (41-100).

The Bike/Ped Demand 2015 layer contains the following attributes:

1. SEG. ID – Segment ID number;
2. ROADWAY ID – RCI segment ID;
3. BEGIN MP – The starting mile point of the segment;
4. END MP – The ending mile point of the segment;
5. COUNTY – The county name;
6. LIMITED_ACCESS – Limited access facility (yes/no)
7. DEMAND SCORE 2015 – The combined bike/ped LDS based on 2015 socioeconomic data; and
8. SEG. LENGTH (FT) – The length of the segment in feet.

The Bike/Ped Demand 2045 layer contains the following attributes:

1. SEG. ID – Segment ID number;
2. ROADWAY ID – RCI segment ID;
3. BEGIN MP – The starting mile point of the segment;
4. END MP – The ending mile point of the segment;
5. COUNTY – The county name;
6. LIMITED_ACCESS – Limited access facility (yes/no);
7. DEMAND SCORE 2045 – The combined bike/ped LDS based on 2045 socioeconomic data; and
8. SEG. LENGTH (FT) – The length of the segment in feet.

These datasets should be updated on an annual basis.

Pedestrian/Bicycle Level of Service (LOS)
The Pedestrian/Bicycle LOS layer is based on a dataset created by consultant staff. The methodology for both the pedestrian and bicycle LOS uses the traffic and roadway factors to evaluate the conditions for non-motorized travel. They use the measurable variables used by transportation planners and engineers to evaluate other travel modes. The Bicycle LOS Model is based on the research documented in Transportation Research Record 1578. Both models employ statistical precision that clearly reflects the bicycling or walking suitability based on a variety of roadway factors.
The formula for calculating bicycle LOS is provided in Figure X.

**Figure 2: Bicycle LOS Formula**

\[
\text{Bicycle LOS} = a_1 \ln \left( \frac{\text{Vol}_{15}}{L_n} \right) + a_2 \text{SP}_1(1+10.38HV)^2 + a_3(1/\text{PR}_5)^2 + a_4 (W_e)^2 + C
\]

Where:
- \( \text{Vol}_{15} \): Volume of directional traffic in 15 minute time period
- \( \text{SP}_1 \): Effective speed limit
- \( L_n \): Total number of directional through lanes
- \( W_e \): Average effective width of outside lane
- \( \text{ADT} \): Average Daily Traffic on the segment or link
- \( D \): Directional Factor (assumed = 0.565)
- \( K_a \): Peak to Daily Factor (assumed = 0.1)
- \( \text{PHF} \): Peak Hour Factor (assumed = 1.0)
- \( HV \): percentage of heavy vehicles (as defined in the 1994 Highway Capacity Manual)
- \( \text{PR}_5 \): FHWA's five point pavement surface condition rating (see Figure 2)

The formula for calculating pedestrian LOS is provided in Figure 4.

**Figure 3: Pedestrian LOS Formula**

\[
\text{Ped LOS} = -1.2276 \ln (W_{ol} + W_1 + f_p x \%\text{OSP} + f_b x W_b + f_{sw} x W_s) + 0.0091 \left( \frac{\text{Vol}_{15}}{L} \right) + 0.0004 \text{SPD}^2 + 6.0468
\]

Where:
- \( W_{ol} \): Width of outside lane (feet)
- \( W_1 \): Width of shoulder or bike lane (feet)
- \( f_p \): On-street parking effect coefficient (=0.50)
- \( \%\text{OSP} \): Percent of segment with on-street parking
- \( f_b \): Buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
- \( W_b \): Buffer width (distance between edge of pavement and sidewalk, feet)
- \( f_{sw} \): Sidewalk presence coefficient \( = 6 - 0.3W_s(3) \)
- \( W_s \): Width of sidewalk (feet)
- \( \text{Vol}_{15} \): average traffic during a fifteen (15) minute period
- \( L \): total number of (through) lanes (for road or street)
- \( \text{SPD} \): Average running speed of motor vehicle traffic (mi/hr)

In both equations, some of the variables are estimated or assumed based on lack of detailed information.
These formulas result in LOS scores for each mode on the segments. In order to assign the segment a bicycle and pedestrian LOS Rating, the following thresholds are used:

- LOS A <=1.5;
- LOS B >1.5 X <=2.5;
- LOS C >2.5 X <=3.5;
- LOS D >3.5 X <=4.5;
- LOS E >4.5 X <=5.5;
- LOS F >5.5.

The Existing Pedestrian LOS layer contains the following attributes:

1. SEG. ID – Segment ID number;
2. ROADWAY ID – RCI segment ID;
3. BEGIN MP – The starting mile point of the segment;
4. END MP – The ending mile point of the segment;
5. COUNTY – The county name;
6. LIMITED_ACCESS – Limited access facility (yes/no);
7. LOS PED SCORE – The LOS score based on the above pedestrian LOS equation;
8. LOS – Pedestrian LOS based on the above score thresholds; and
9. SEG. LENGTH (FT) – The length of the segment in feet.

The Existing Bicycle LOS layer contains the following attributes:

1. SEG. ID – Segment ID number;
2. ROADWAY ID – RCI segment ID;
3. BEGIN MP – The starting mile point of the segment;
4. END MP – The ending mile point of the segment;
5. COUNTY – County name;
6. LIMITED_ACCESS – Limited access facility (yes/no);
7. LOS BIKE SCORE – The LOS score based on the above bicycle LOS equation;
8. LOS – Bicycle LOS based on the above score thresholds; and
9. SEG. LENGTH (FT) – Length of the segment in feet.

These datasets should be updated on an as needed basis.

Strava Bicycling and Running Data 2016
The Strava Bicycling and Running Data dataset is provided by the Strava smartphone application users who are walking, running, and biking in Florida. Users of the application upload their rides and runs to Strava every week via their smartphone or geographic positioning system (GPS) device. Strava Metro then aggregates and de-identifies the data and partners with transportation planners to help them improve infrastructure for bicyclists and pedestrians.3

---

3 https://metro.strava.com/
Within the study area, the Strava data provides information on the average number of runs or bicycle trips by roadway segment. The data covers the period from January to June 2016.

The Avg. Daily Run Trips by Roadway Segment layer contains the following attributes:

1. COUNTY – The name of the county where the roadway segment is located;
2. START DATE – The starting date for the period when the data was collected (January 1, 2016);
3. END DATE – The ending date for the period when the data was collected (June 30, 2016);
4. YEAR – Year of the data collection period (2016);
5. MODE – Only run trips were collected;
6. TOTAL COUNT – The total number of run trips collected during this period; and
7. AVG. DAILY TRIPS – The average daily number of run trips on the road segment, calculated by dividing 180 days by the total count.

The Avg. Daily Bike Trips by Roadway Segment layer contains the following attributes:

1. COUNTY – The name of the county where the roadway segment is located;
2. START DATE – The starting date for the period when the data was collected (January 1, 2016);
3. END DATE – The ending date for the period when the data was collected (June 30, 2016);
4. YEAR – Year of the data collection period (2016);
5. MODE – Only bike trips were collected;
6. TOTAL COUNT – The total number of bike trips collected during this period; and
7. AVG. DAILY TRIPS – The average daily number of bike trips on the road segment, calculated by dividing 180 days by the total count.

These datasets should be updated on an as it becomes available at FDOT Central office.

Trails
The Trails dataset provides information and shows the location of existing and proposed recreational trails in the State of Florida. It is comprised of four data layers:

- Florida Coast – to – Coast Trail;
- Shared Use Non-Motorized Trail (SUN Trail) Network;
- Existing Recreational Trails; and
- Florida Greenways & Trails System (FGTS) Opportunities.

The Florida Coast – to – Coast Trail is a proposed continuous paved multi-use trail across Central Florida from the Gulf of Mexico to the Atlantic Ocean. It will span approximately 250 miles and is currently more than 80% completed. Once completed, it will “link” communities between St. Petersburg and Titusville along its entire length, allowing residents and visitors to
explore Central Florida by bicycle or on foot. The layer represents the current status of the trail as of December 2018.

The Florida Coast – To – Coast Trail layer contains the following attributes:

1. Segment Name – The name of the segment of the Coast – to – Coast Trail;
2. Status – Whether the segment is existing or proposed;
3. Segment Length (Mi) – The length of the trail segment in miles; and
4. Link – A web link to information on the trail segment or description of the segment if there is not a web link.

The SUN Trail Network was created under Florida Statutes 339.81 with the goal of constructing a statewide system of paved non-motorized trails as part of the Florida Greenways & Trails System (FGTS). The program receives $25 million annually from sale of vehicle tags. This dataset represents the existing, planned, and conceptual paved multiuse trails for bicyclists and pedestrians, physically separated from vehicular traffic, that form a land-based statewide trail network. The layer stays a synthesis of trail planning efforts of municipalities, counties, transportation planning organizations, other public agencies and non-profits entities throughout Florida. This data does not include all existing, proposed, and conceptual trails in Florida, but focuses on high priority linear corridors and connections of statewide and regional significance to form a comprehensive connected system. The SUN Trail data is modified by removing corridors not envisioned as paved trails. The layer represents the current status of the SUN Trail Network as of August 2019.

The SUN Trail Network layer contains the following attributes:

1. NAME – The name of the trail segment;
2. RANK – The rank of the trail segment in the FGTS plan;
3. STATUS - The current status of the trail segment. The statuses are:
   a. EXISTING – The trail segment is existing
   b. GAP NO ACQUISITION – The segment is not existing and properties have not been identified for acquisition
   c. GAP REQUIRING ACQUISITION – The segment is not existing, properties for acquisition have been identified but the process has not started; and
   d. PROGRAMMED/FUNDED – The segment is not existing but funds are programmed/set aside for property acquisition and/or trail construction.
4. COUNTY – The county where the segment is located; and
5. DISTRICT – The FDOT District where the segment is located.

The Existing Recreational Trails layer includes existing recreational trails located in the State of Florida. An existing recreational trail is defined as a paved or unpaved trail for hiking, biking, equestrian, multiple use, paddling, or motorized use. This layer does not include in-road bike lanes or sidewalks. The layer is compiled from local, state, and federal agencies and

---

organizations which upload the trail data to the Florida Trails Network website.\(^5\) The layer provides all of the existing recreational trails as of March 2019.

The Existing Recreation Trails layer contains the following attributes:

1. NAME & NAME2 – The name of the recreational trail;
2. SURFACE – Whether the trail surface is paved, unpaved, or unknown;
3. TYPE – Whether the trail is established for biking, equestrian, hiking, motorized vehicles, multi-use, paddling, or unknown;
4. HIKING, BIKING, or EQUESTRIAN – Whether it is known if these activities are allowed or not on the trail;
5. DESIGNATED – Whether the trail is officially designated by the State of Florida;
6. LENGTH (MI) – The length in miles of the recreational trail;
7. MGMT – The department or organization that is responsible for managing the recreational trail; and
8. COUNTY – The county where the trail is located.

The FGTS Priority Trail Opportunities identifies land-based trail opportunities in the state for possible acquisition to develop and expand the trail network. These priority corridors are the focused vision for trails in the state of Florida and rank higher for implementation than the FGTS Opportunity Trail Corridors. The dataset is based on the Florida 2018 – 2022 Greenways and Trails System Plan. This layer is to be used for planning purposes only and not be used to place any restrictions or other conditions on property located along the possible trail segment. The layer provides priority trail opportunities as of February 2018.

The FGTS Priority Trail Opportunities layer contains the following attributes:

1. CORRIDOR – The name of the entire trail/trail corridor;
2. SEGMENT NAME – The name of the segment within the trail corridor;
3. LENGTH (MI) – The length of the segment in miles; and
4. COUNTY – The county where the trail is located.

All of these datasets should be updated annually.

Transit Systems

The Transit Systems group layer contains multiple datasets, providing information on both intercity and intracity transportation services across multiple modes. It also identifies Park & Ride lots within the FDOT District Five study area. The datasets within this group layer include:

- SunRail;
- Park & Ride Lots;
- Transit Centers;
- Local Transit Service;

\(^5\) http://www.FloridaTrailsNetwork.com
• Transit Ridership; and
• Interregional Transit Service.

The SunRail layer shows the existing and proposed commuter rail service from the DeLand Amtrak Station in Volusia County southwest to the Poinciana Industrial Park Station in Osceola County. The SunRail service is broken up into three phases: Existing, Phase 2 North, and Phase 3 – Airport Connector. The dataset provides information on both on the rail and the individual stations.

Each of the SunRail data layers contains the following attributes:

1. **PHASE** – The phase the rail line will be constructed;
2. **LENGTH** – The length of the rail line for that phase; and
3. **WebLink** – Web link to where the user can find more information about that rail line/phase.

Each of the SunRail Stations data layers contains the following attributes:

1. **PHASE** – The phase the rail line will be constructed;
2. **Name** – The name of the station; and
3. **WebLink** – Web link to where the user can find more information about the station/phase.

The next layer under the Transit System Group layer is Park & Ride lots. This layer shows the location of every FDOT designated Park & Ride lots within the District. There are currently 14 designated lots. The only attribute within this layer is the name of the Park & Ride lot.

The Transit Centers layer provides the location and name of each designated transfer point within the LYNX service area. There are 18 transit centers in the study area and are either classified as a Super Stop or the Central Station. A Super Stop is located generally on the edge of the service area and provides an opportunity for commuter routes, neighborhood shuttles, and/or other routes from adjacent transit providers intersect with the LYNX routes to provide regional connections to the Orlando Metropolitan Area. The Central Station is LYNX’s main downtown terminal where the majority of LYNX’s bus routes meet to allow for transfers.

The Transit Centers layer contains the following attributes:

1. **Name** – The name of the Central Station or Super Stop;
2. **City** – The city where the facility is located; and
3. **Stop Type** – Whether the facility is either a super stop or the downtown central station.

The Local Transit Service layer is a layer group that provides the routes and bus stops which comprises each of the transit systems within FDOT District Five. The layers within this group include:

• Bus Routes by System;
• Bus Route by Route; and
• Bus Stops.

The Bus Routes by System is a composite layer of each of the transit systems within the study area. It is a viewable layer that displays each transit system (LYNX, UCF, LakeXpress, Space Coast Area Transit, LAMTD, Citrus Connection, and Polk County Transit Service) as a separate color. It is viewable from the maximum extent (Level 7) until the scale reaches Level 12. At this point, the Bus Routes by System is replaced by Bus Routes by Routes, a selectable layer that shows the individual bus route for each transit system. At zoom level 13, the Bus Stops Layer becomes visible. This is also a selectable layer.

The Bus Routes by Route contains the following attributes:

1. SYSROUTE – The route name by transit system;
2. ROUTE – The name of the route as shown in public documents (i.e. website, route guide, etc.);
3. TRANSYSTEM – The name of the transit system associated with the selected route; and
4. SCHEDULE – A web link to the bus schedule for the selected route.

The Bus Stops layer contains the following attributes:

1. Stop # - The identification number for the bus stop;
2. Transit System – The name of the transit system associated with the selected stop; and
3. Total Daily Ons & Offs – The daily ridership reported for each bus stop (only available for LYNX bus stops.)

The next layer is the Transit Ridership layer. This dataset provides 2017 ridership information of the LYNX transit system at both the stop and route level. Both layers provide a graduated symbol and color to illustrate the magnitude of ridership reported at each stop and bus route.

The LYNX Ridership by Stop layer contains the following attributes:

1. STOP ID – The identification number for the bus stop;
2. STOP NAME – The name of each stop based on the street the stop is located on and the nearest cross street or the name of the Super Stop/Central Terminal;
3. DAILY ON – The total number of daily boardings reported at the bus stop;
4. DAILY OFF – The total number of daily alightings reported at the bus stop; and
5. DAILY TOTAL – The sum of the daily boarding and alightings at the bus stop.

The LYNX Ridership by Route layer contains the following attributes:

1. ROUTE ID – The identification of the route;
2. ROUTE NAME – The name of the route as shown in public documents (website, route guide, etc.);
3. TOT_ANNUAL_TRIPS – The total annual ridership reported for the route;
4. AVG. DAILY TRIPS – Average daily ridership of each route calculated by dividing the total annual trips by 365 days and rounded to the nearest whole number; and
5. SCHEDULE – A web link to the route schedule for the selected route.

The last layer in the Transit System layer group is the Interregional Transit Service. This layer shows the intercity transit service available in the state. There are nine intercity transit providers, providing access to each of Florida's major cities. This layer group provides the routes and stops associated with these providers and based on the maps and schedules located on their respective websites. The nine intercity transit providers are:

- Red Coach;
- MegaBus;
- La Cubana;
- Jet Set Line;
- All Tours;
- GMG Transport;
- HBCU Shuttle;
- Greyhound; and
- The Florida Express Bus.

Each of the intercity stops layer contains the following attributes:

1. Service – The name of the company that uses the bus stop;
2. Stop Name – The name of the stop;
3. Stop Address;
4. Stop City; and
5. Website – A web link to the intercity bus provider serving the bus stop.

Each of the intercity routes layer contains the following attributes:

1. Service – The name of the intercity provider;
2. Website – A web link to the intercity bus provider; and

Each of these datasets should be updated on an annual basis.

Roadway Lighting
The Roadway Lighting datasets are based on lighting fixtures data contained in the FDOT RCI database. The RCI data provides information about the various types of light fixtures by RCI segment. These numbers were aggregated to provide a total number of lighting fixtures by segment. This number was then normalized by computing the number of poles per mile with the results being depicted in the Roadway Lighting – Poles per Mile layer with the following attributes:

1. ROADWAY – RCI segment ID;
2. BEGIN MP – The starting mile point of the segment;
3. END MP – The ending mile point of the segment;
4. TOTAL POLES – Total light fixtures for this segment;
5. **LENGTH** - The segment length in miles; and
6. **POLES PER MILE** – Number of light fixtures per mile after normalization with segment length.

Utilizing spatial analytics within GIS, lighting density per square mile was computed which is reflected in the Roadway Lighting – Pole Density layer.

**Adopted 5-Year Work Program**

This dataset contains the Fiscal Year 2020 to 2024 Adopted Work Program projects from the FDOT Office of Work Program and Budget. The work program is the FDOT’s five year budget showing where transportation investments are expected to take place in the upcoming years.

The AWP FY 2020-2024 (July 2019) layer contains the following attributes:

1. **Work Program (WP) ITEM** – The Work Program Item Number for the transportation project;
2. **WP ITM SEG.** – The segment number of the work program project;
3. **WP ITEM+SEG** – The full identification number consisting of the WP ITEM and the WP ITM SEG number;
4. **COUNTY** – The county where the project is located;
5. **DESCRIPTION** – A brief description of the work program project;
6. **BEGIN MP** – The starting mile post for the work program project;
7. **END MP** – The ending mile post for the work program project;
8. **LENGTH (MI)** – The length in miles of the work program project;
9. **PROJECT TYPE** – The type of transportation project;
10. **CATEGORY** – The work program category the project falls under;
11. **PHASE** – The short code for the Phase the project is in;
12. **PHASE DESCRIPTION** – The full phase name;
13. **FISCAL YEAR** – The proposed fiscal year the project will enter the identified phase; and
14. **AMOUNT** – The amount in millions of how much the project phase will cost.

This dataset should be updated annually.

**Environmental**

The Environmental layer group consists of two datasets: Federal Emergency Management Agency (FEMA) Floodplains and National Wetlands Inventory (NWI) Wetlands. The FEMA Floodplains dataset contains information about the flood hazards within the study area. These zones are used by FEMA to designate the Special Flood Hazard and for insurance rating purposes. Only those zones designated as a High Risk Area, within a 100 year flood zone, are identified in this layer. The NWI Wetland dataset represents the extent, approximate location, type of wetland, and deep water habitats.
The FEMA Floodplains layer contains the following attributes:

1. FLOOD ZONE – The FEMA Flood Zone Code. The identifies areas with the following codes:
   a. A - Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage;
   b. AE - The base floodplain where base flood elevations are provided;
   c. AH - Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet;
   d. AO - River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet; and
   e. Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves.
2. ACRES – The size of the natural features in acres;
3. FLOODPLAIN – All features are identified located in the 100-Year Floodplain;
4. RISK LEVEL – Either a High Risk Area or High Risk – Coastal Area;
5. DESCRIPTION – All features are classified as Inside Special Flood Hazard Area; and
6. County – The county where the natural feature is located.

The NWI Wetlands layer contains the following attributes:

1. WETLAND CODE – The code given to a wetland based on their system, subsystem, class, subclass, and water;
2. WETLAND TYPE – A description of the dominate types of wetland systems;
3. WETLAND SYSTEM – The allocation given to a wetland determined by the amount of tidal influence and the limit of ocean-derived salinity;
4. CLASS – The classification abbreviation;
5. CLASS DESCRIPTION – A sub designation of wetland systems identified by landscape position, vegetation cover and hydrologic regime; and
6. WATER – The code description for hydrologic characteristics, such as, groundwater fluctuations and surface inundation.

The relationship between various codes and attributes is shown in Figure 5. More information on how the wetlands are classified may be found on U.S. Fish & Wildlife Services National Wetland Inventory Home Page (https://www.fws.gov/wetlands/index.html). These datasets should be updated annually.
Figure 4: Wetland Systems\(^6\)

WETLANDS AND DEEPWATER HABITATS

**SYSTEM**

- Marine
  - Subtidal
    - Aquatic Bed
    - Reef
  - Intertidal
- Estuarine
  - Subtidal
    - Aquatic Bed
    - Reef
    - Streambed
    - Rocky Shore
    - Unconsolidated Shore
    - Emergent Wetland
    - Scrub-Shrub Wetland
    - Forested Wetland
  - Intertidal
- Tidal
  - Rock Bottom
  - Unconsolidated Bottom
  - Streambed
  - Rocky Shore
  - Unconsolidated Shore
  - Emergent Wetland
  - Lower Perennial
    - Unconsolidated Bottom
    - Rocky Shore
    - Emergent Wetland
  - Upper Perennial
    - Rock Bottom
    - Unconsolidated Bottom
    - Aquatic Bed
    - Rocky Shore
    - Unconsolidated Shore
  - Intermittent
    - Streambed
- Riverine
- Lacustrine
  - Littoral
  - Palustrine

**CLASS**

- Rock Bottom
- Unconsolidated Bottom
- Aquatic Bed
- Reef
- Rocky Shore
- Unconsolidated Shore

---

Composite Underserved Population Concentration

The Composite Underserved Population Concentration layer consists of a dataset created by computing a composite score reflecting underserved population groups (minorities, low income, zero vehicle, underage and older adults, and limited English proficiency). The composite score is based on information on these population groups from the US Census American Community Survey (ACS) 2017 and summarized at the block group level. The scores range from 0 to 50 (10 points max for each category). Table 4 illustrates how the underserved population score is calculated.

Table 4: Composite Underserved Population Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Value</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Percent below Poverty</td>
<td>&lt;10%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>10-20%</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>20-30%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>30-40%</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>40-50%</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>&gt;50%</td>
<td>10</td>
</tr>
<tr>
<td>Zero-Vehicle Household Percent</td>
<td>&lt;5%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5-10%</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>10-15%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>15-20%</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>20-30%</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>&gt;30%</td>
<td>10</td>
</tr>
<tr>
<td>Minority Population</td>
<td>&lt;10%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>10-20%</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>20-30%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>30-40%</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>40-50%</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>&gt;50%</td>
<td>10</td>
</tr>
<tr>
<td>Underage and Older Adults (Age &lt;18 and &gt;65)</td>
<td>&lt;25%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>25-30%</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>30-35%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>35-40%</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>40-50%</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>&gt;50%</td>
<td>10</td>
</tr>
<tr>
<td>Limited English Proficiency</td>
<td>&lt;5%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5-10%</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>10-15%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>15-20%</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>20-25%</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>&gt;25%</td>
<td>10</td>
</tr>
</tbody>
</table>

The composite score is displayed in a graduated color scale with the darker the color, the higher the score.
The Composite Underserved Population Concentration layer contains the following attributes:

1. Total Population – The population of the block group as of the 2017 ACS;
2. Below Poverty Pop. Pct. – The percent of the population in the block group that is below the poverty level;
3. Minority Pop. Pct. – The percent of the population in the block group that is part of a minority group;
4. Zero Car Household Pct. – The percent of the households in the block group that does not own a personal automobile;
5. Old/Young Pop. Pct. – The percent of population in the block group that is under 18 or older than 65;
6. Limited English Language Pop. Pct. – The percent of the population in the block group that has limited proficiency in English;
7. Transport to Work via Bike, Foot, Transit Pct. – The percent of the population in the block group that commutes to work via walking, biking, or transit; and
8. Composite Score – The composite underserved population score for the block group based on criteria in Table 4.

This dataset should be updated when new Census/ACS data becomes available.

Land Use, Population, Employment
The Land Use, Population, and Employment Group Layer contains the following data layers:

- Census Block Group Data;
- Generalized Future Land Use; and
- Population & Employment Densities.

The purpose of this group’s layers is to provide additional information on population and land uses within the study area. Each of the layers is selectable and shows information at the block group and subarea level. More information on each layer is provided below.

The Census Block Group Data provides the percent of the population that is below the poverty level, lives in a zero-vehicle household, and the population density of the block group. The Population Percentage below Poverty Level contains 2010 census block groups with 2017 ACS data. The data was calculated by dividing the total number of population at or below the poverty line out of the total population of the block group. This layer contains the following attributes:

1. Total Population – The total population of the block group as of the 2017 census;
2. Below Poverty Pop. Pct. – The percent of the population in the block group that is below the poverty level;
3. Minority Pop. Pct. – The percent of the population in the block group that is part of a minority group;
4. Zero Car Household Pct. – The percent of the households in the block group that does not own a personal automobile;
5. Old/Young Pop. Pct. – The percent of population in the block group that is under 18 or older than 65; and
6. Transport to Work via Bike, Foot, and Transit Pct. – The percent of the population in the block group that commutes to work via walking, biking, or transit.

The Zero-Vehicles Households Percentage also contains the 2010 census block groups with 2017 ACS data. This layer contains the same attributes as the Population Percentage below Poverty Level layer.

The Population Density data is also uses the 2010 census block group spatial data and is based on the 2017 ACS. The population density for each block group was calculated by dividing the total population for each block group buy the total land area of the block group. The density is displayed in a ten level, graduated scale from low density to high density. The darker the color the more dense the block group. The layer contains the same attributes as the previous two with the addition of the population density per square mile.

Each of these data layers should be updated annually.

The next data layer in the Land Use, Population, Employment Group Layer is Generalized Future Land Use (2017) provided by the East Central Florida Regional Planning Council (ECFRPC). This dataset contains the generalized future land use categories derived from parcel-specific land use data for FDOT District Five. The original land uses from the parcel data have been collapsed into the following 10 generalized classes:

- Residential;
- Commercial/Office;
- Mixed Use;
- Agricultural;
- Conservation;
- Institutional/Public;
- Industrial;
- Recreational;
- Water; and
- Other.

The Generalized Future Land Use (2017) Layer contains the following attributes:

1. LAND USE TYPE – Land Use Type as classified by one of the 10 generalized classes (abbreviated); and
2. Acres – The size of the selected land use category in acres.

This dataset should be updated annually.

The last dataset within the Land Use, Population, Employment Group Layer is the Population and Employment densities at the Travel Analysis Zone (TAZ) level as determined by the Central
Florida Regional Planning Model Version 6 (CFRPM6). This layer provides the composite measure of the population and employment density per acre for the 2015 base year and 2045 future year. Both of these layers (Year 2015 and Year 2045) are selectable layers that display the population plus employment density on a seven category color graduated scale ranging from low to high density with the higher density associated with the darker colors. Specifically, the Existing (Year 2015) Pop. + Emp. Density layer contains the following attributes:

1. TAZ – TAZ identification number;
2. COUNTY – The county where the TAZ is located;
3. TOTAL POP. 2015 – The total population of the TAZ;
4. HOTEL/MOTEL POP. 2015 – The visitor population for the TAZ as determined by the number of hotel/motel rooms in the TAZ;
5. INDUSTRIAL EMP. 2015 – The number of industrial employees working in the TAZ;
6. COMMERCIAL EMP. 2015 – The number of commercial/office employees working in the TAZ;
7. SERVICE EMP. 2015 – The number of service sector employees working in the TAZ;
8. TOTAL EMP. 2015 – The sum of the industrial, commercial, and service employees;
9. POP. + EMP. 2015 – The sum of the total population and the total employment;
10. POP. + EMP. DENSITY 2015 – The total population plus employment divided by the size (acres) of the TAZ;
11. ACREAGE – The size of the TAZ in acres;
12. POP. DENSITY 2015 – The total population divided by the size of the TAZ;
13. EMP. DENSITY 2015 – The total employment divided by the size of the TAZ; and
14. HOTEL/MOTEL DENSITY 2015 – The hotel/motel population divided by the size of the TAZ.

The Future (Year 2045) Pop. + Emp. Density layer contains the following attributes:

1. TAZ – TAZ identification number;
2. COUNTY – The county where the TAZ is located;
3. TOTAL POP. 2045 – The total population of the TAZ;
4. HOTEL/MOTEL POP. 2045 – The visitor population for the TAZ as determined by the number of hotel/motel rooms in the TAZ;
5. INDUSTRIAL EMP. 2045 – The number of industrial employees working in the TAZ;
6. COMMERCIAL EMP. 2045 – The number of commercial/office employees working in the TAZ;
7. SERVICE EMP. 2045 – The number of service sector employees working in the TAZ;
8. TOTAL EMP. 2045 – The sum of the industrial, commercial, and service employees;
9. POP. + EMP. 2045 – The sum of the total population and the total employment;
10. POP. + EMP. DENSITY 2045 – The total population plus employment divided by the size (acres) of the TAZ; and
11. ACREAGE – The size of the TAZ in acres.

Both of these datasets should be updated on as needed basis.
**Base Data**

The last layer group in the map legend is the Base Data Group Layer. This group layer consists of the following three groups:

- Level of Service;
- Roadway Characteristics; and
- Jurisdictional Boundaries.

The purpose of this group layer is to provide general information on the transportation network within the study area and identify the jurisdictional boundaries of the municipalities and regional agencies in District Five.

The Level of Service (LOS) dataset provides a qualitative measure of the traffic service of each state and US highway within District Five. LOS is used to analyze highways by categorizing traffic flow and assigning quality levels of traffic based on performance measures such as travel speed, traffic volume, and segment delay. The LOS dataset is a selectable layer that displays information on a color graded A to F scale. The data is from 2019. The layer contains the following attributes:

1. FACILITY – The name of the road;
2. ROADWAY ID – RCI segment ID;
3. BEGIN MP – The starting mile post for the segment;
4. END MP – The ending mile post for the segment;
5. LANES – The bidirectional number of travel lanes on the road segment;
6. LOS – The LOS of the road segment as determined by the number of lanes and daily traffic using the FDOT LOS Generalized Tables;
7. LOS STANDARD – the FDOT LOS standard for the facility; and
8. SEG_LENGTH – The length of the segment in feet.

This dataset should be updated annually.

The RCI layer group provides general information about the road network throughout the study area and state. It is comprised of nine layers:

- FDOT Maintained Roadways;
- Major Off-System Roads;
- AADT;
- Number of Lanes (bi-directional);
- Bridges;
- Street lighting;
- Maximum Speed Limits;
- Pavement Conditions; and
- Urban Area.
The FDOT Maintained Roadways layer highlights all road and roadway facilities under the jurisdiction of FDOT in District Five and across the state. It is these facilities that are subject to the bike/ped analysis in the TransPed tool. The layer is comprised of the following attributes:

1. RCI SEG. ID – The segment identification number in the FDOT RCI database;
2. BEGIN POST – The starting milepost of the selected segment;
3. END POST – The ending milepost of the selected segment; and
4. COUNTY – County name.

The Major Off-System Roads layer shows all of the Florida roads that are not maintained by FDOT and are city or county owned. These facilities are not the primary focus of the TransPed tool but the information contained within is helpful to cities and counties as they prioritize bike/ped improvements. The layer contains the following attributes:

1. RCI SEG. ID – The segment identification number in the FDOT RCI database;
2. BEGIN POST – The starting milepost of the selected segment;
3. END POST – The ending milepost of the selected segment;
4. COUNTY – The county name.

The next layer is the AADT. This layer contains the annual average daily traffic on each facility within the RCI database, including both FDOT Maintained Roadways and Major Off-System Roads. This layer contains the following attributes:

1. RCI SEG. ID – The segment identification number in the FDOT RCI database;
2. BEGIN MP – The starting milepost of the selected segment;
3. END MP – The ending milepost of the selected segment;
4. FROM – The starting cross street of the road segment;
5. TO – The ending cross street of the road segment;
6. YEAR – The year the AADT data was collected;
7. AADT - The average annual daily traffic reported on the road segment; and
8. COUNTY – The county name.

The AADT is displayed on scale that varies by both thickness and color.

Similar to the AADT layer, the Number of Lanes (bi-directional) layer contain information on the number of travel lanes on each facility in the RCI database, including both the FDOT Maintained Roadways and Major Off-System Roads. The layer contains the following attributes:

1. RCI SEG. ID – The segment identification number in the FDOT RCI database;
2. BEGIN MP – The starting milepost of the selected segment;
3. END MP – The ending milepost of the selected segment;
4. TOTAL LANES - The number of bi-directional travel lanes; and
5. COUNTY – The county where the road segment is located.

The Number of Lanes layer is displayed on a scale that varies by both thickness and color.
The Bridges layer provides spatial information on all bridges and overpasses located on both FDOT Maintained Roadways and Major Off-System Roads. The layer contains the following attributes:

1. STRUCTURE ID – The identification number of the bridge or overpass in the FDOT database;
2. RCI SEG. ID - The segment identification number in the FDOT RCI database;
3. BEGIN MP – The starting milepost of the selected segment;
4. END MP – The ending milepost of the selected segment; and
5. COUNTY – The county name.

The Maximum Speed Limits layer displays the maximum speed limit on both FDOT Maintained Roadways and Major Off-Street Roads. The Maximum Speed Limit layer is displayed on a scale that varies by both thickness and color. The layer contains the following attributes:

1. RCI SEG. ID – The segment identification number in the FDOT RCI database;
2. BEGIN MP – The starting milepost of the selected segment;
3. END MP – The ending milepost of the selected segment;
4. POSTED SPEED – The posted speed limit of the segment; and
5. COUNTY – The county where the road segment is located.

The Pavement Conditions layer provides the pavement condition ratings as reported in the RCI database for both FDOT Maintained Roadways and Major Off-Street Roads. The pavement conditions is reported on a five point scale ranging from very poor to very good. The layer contains the following attributes:

1. RCI SEG. ID – The segment identification number in the FDOT RCI database;
2. BEGIN MP – The starting milepost of the selected segment;
3. END MP – The ending milepost of the selected segment;
4. SIDE – The side of the road (left or right) or composite (both sides) where the pavement condition was evaluated;
5. CONDITION – The reported condition of the pavement on that side of the road;
6. SEGMENT_LENGTH - The length of the segment in feet; and
7. COUNTY – The county name.

The last data layer in the RCI layer group is the Urban Areas. The Urban Areas layer identifies the census defined urban areas (50,000 or more population) in the District and state. The layer contains the following attributes:

1. NAME – The name of the urban area; and
2. POPULATION – The population of the urban area as of the 2010 Census.

All of these datasets in the RCI layer group should be updated annually.
The final layer group in the Base Data Group layer is the Jurisdictions layer group. This layer group provides information on the City Limits, MPO Boundaries, Regional Planning Council Boundaries, and County Boundaries in the State of Florida. These layers should be updated on as needed basis with the City Limits updated annually.
3. Sidewalk Gap Prioritization

While the data layers provide valuable information on the current and future conditions of the non-motorized transportation network, the Sidewalk Gap Prioritization feature in TransPed helps to prioritize gaps in the sidewalk network and guide investment opportunities. This prioritization is accomplished by feeding data contained in some of the data layers into an algorithm to generate a composite score for each gap identified in the Sidewalk Gap layer. Table 5 provides the scoring category, criteria, score range, and default weights for the prioritization formula. The scoring categories are based on the goals found in the Florida Transportation Plan. An explanation of how each criteria score is calculated and the data layers used is provided in the section below.

The composite score is then assigned to each gap in the sidewalk network and used to generate a prioritization report for the entire study area and each county with the gaps ranked from highest score to lowest. The highest total composite score a Sidewalk Gap Segment could receive is 100. However, the Sidewalk Gap Prioritization Scores range from 16.75 to 83.75. The full prioritization report may be found in Appendix A. Figure 6 provides an example Sidewalk Gap Scoring Report.
<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>Map Layers Used</th>
<th>Score Range</th>
<th>Default Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety and Security</td>
<td>Number of Pedestrian Crashes</td>
<td>Pedestrian Crashes 2014-2018</td>
<td>0 to 50</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Number of Pedestrian Fatalities</td>
<td></td>
<td>0 to 50</td>
<td></td>
</tr>
<tr>
<td>Agile, Resilient, and Quality</td>
<td>Closing System Gap</td>
<td>Sidewalks Gaps</td>
<td>0 to 50</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Pavement Condition</td>
<td>Pavement Conditions</td>
<td>0 to 25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pedestrian Level of Service</td>
<td>Existing Pedestrian Level of Service</td>
<td>0 to 25</td>
<td></td>
</tr>
<tr>
<td>Efficient and Reliable Mobility</td>
<td>Pedestrian Demand</td>
<td>Bike/Ped Demand</td>
<td>0 to 50</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>Means of Transportation to Work</td>
<td>Census Block Data (ACS 2017)</td>
<td>0 to 50</td>
<td></td>
</tr>
<tr>
<td>More Transportation Choices</td>
<td>SunRail Station, Intercity Transit</td>
<td>SunRail; Interregional Transit Service</td>
<td>0 to 30</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Bus Stops, Trails, Park &amp; Ride Lots</td>
<td>Bus Stops, Trails*, Park and Ride Lots</td>
<td>0 to 20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Underserved Population Composite</td>
<td>Composite Underserved Population Concentration</td>
<td>0 to 50</td>
<td></td>
</tr>
<tr>
<td>Economic Competitiveness</td>
<td>Employment Density 2015</td>
<td></td>
<td>0 to 30</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Hotel/Motel Population Density 2015</td>
<td>Existing (Year 2015) Pop. + Emp. Density</td>
<td>0 to 40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residential Population Density 2015</td>
<td></td>
<td>0 to 30</td>
<td></td>
</tr>
<tr>
<td>Quality Places</td>
<td>Schools Vicinity</td>
<td>Schools</td>
<td>0 to 25</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>POI Vicinity</td>
<td>Points of Interests</td>
<td>0 to 25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Land Use</td>
<td>Generalized Future Land Use (2017)</td>
<td>0 to 25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban Area Vicinity</td>
<td>Urban Areas</td>
<td>0 to 25</td>
<td></td>
</tr>
<tr>
<td>Environment &amp; Conservation</td>
<td>Floodplains/Wetlands</td>
<td>Environmental*</td>
<td>0 to 50</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Vehicle Level of Service</td>
<td>Level of Service</td>
<td>0 to 50</td>
<td></td>
</tr>
</tbody>
</table>

*Layer Group
Figure 5: Sample Gap Prioritization Report

Sidewalk Gap Prioritization Detail Report

Gap Id: Orange-037
Roadway Id: 75020000
Orange County
State Route: SR 500
Sidewalk Length: 0.503

Sidewalk Gap Type: Full Gap - SW missing on both roadsides

<table>
<thead>
<tr>
<th>Overall Rank: 5</th>
<th>Project Prioritization Scores</th>
<th>Priority override: false</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Criteria</td>
<td>Value</td>
</tr>
<tr>
<td>1. Safety and Security</td>
<td>Number of Pedestrian Crashes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Number of Pedestrian Fatalities</td>
<td>1</td>
</tr>
<tr>
<td>2. Agile, Resilient and Quality</td>
<td>Closing System Gap</td>
<td>Full</td>
</tr>
<tr>
<td></td>
<td>Pavement Condition</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Pedestrian LOS (Level of Service)</td>
<td>E</td>
</tr>
<tr>
<td>3. Efficient and Reliable Mobility</td>
<td>Pedestrian Demand 2010</td>
<td>29.4</td>
</tr>
<tr>
<td></td>
<td>Method of Commute to Work</td>
<td>30.6</td>
</tr>
<tr>
<td>4. More Transportation Choices</td>
<td>Near Regional Transit (SunRail, Intercity-region)</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Near Commuter Sites (Bus Stops, Trails, Park&amp;Ride)</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Underserved Populations</td>
<td>12.0</td>
</tr>
<tr>
<td>5. Economic Competitiveness</td>
<td>Population Density 2015</td>
<td>4.880</td>
</tr>
<tr>
<td></td>
<td>Employment Density 2015</td>
<td>4.884</td>
</tr>
<tr>
<td></td>
<td>Hotel/Motel Density 2015</td>
<td>0.906</td>
</tr>
<tr>
<td></td>
<td>Access to Community Facilities</td>
<td>1/4 Mile</td>
</tr>
<tr>
<td></td>
<td>Pedestrian Friendly Land Use</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Within an Urban Area</td>
<td>Yes</td>
</tr>
<tr>
<td>7. Environmental and Conservation</td>
<td>Floodplains or Wetlands</td>
<td>Outside</td>
</tr>
<tr>
<td></td>
<td>Traffic LOS (Level of Service)</td>
<td>D</td>
</tr>
<tr>
<td>Prioritization Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Safety and Security
The first calculation in the Sidewalk Prioritization Gap Prioritization Score is based on the safety and security of the pedestrian network. The overall score for this category is the sum of two variables: Number of Pedestrian Crashes and Number of Pedestrian Facilities. In order to calculate these values, it uses information contained in the Pedestrian Crashes 2014-2018 map layer. The Number of Pedestrian Crashes is calculated by applying a 50’ buffer around each segment in the Sidewalk Gap layer and summing up the total number of pedestrian crashes reported within the buffer zone. Table 6 provides the value and score for the number of pedestrian crashes.

Table 6: Safety & Security Criteria Values

<table>
<thead>
<tr>
<th>Number of Pedestrian Crashes</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>5+</td>
<td>50</td>
</tr>
</tbody>
</table>

If any of the reported pedestrian crashes resulted in a fatality an additional 50 points is applied to the score (Number of Pedestrian Fatalities). The total number of points awarded in this category is 100 with a total weighted value of 25 points.

Agile, Resilient and Quality
The next prioritization category in the equation is Agile, Resilient and Quality. This category assess whether the gap is a full or partial gap, condition of the pavement along the segment, and the overall pedestrian level of service. The data layers involved in this calculation is the Sidewalks Gaps, Pavement Conditions, and Existing Pedestrian Level of Service. Table 7 provides the score value for each of the criterion in this category.
Table 7: Agile, Resilient, and Quality Criteria Values

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Value</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closing System Gap</td>
<td>Partial Gap</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Full Gap</td>
<td>50</td>
</tr>
<tr>
<td>Pavement Condition</td>
<td>0 to 1 – Very Poor</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>1 to 2 – Poor</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>2 to 3 – Fair</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>3 to 4 – Good</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>4 to 5 – Very Good</td>
<td>5</td>
</tr>
<tr>
<td>Pedestrian Level of Service</td>
<td>A</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>25</td>
</tr>
</tbody>
</table>

The Closing System Gap value is based on the GAP TYPE attribute in the Sidewalks Gaps layer where a Partial Gap is where one side of the road segment is missing a sidewalk and a Full Gap is where there is no sidewalk on either side of the road segment. For the Pavement Condition Criteria, a 50’ buffer is applied to each segment in the Sidewalks Gaps layer to select adjacent Existing Pedestrian Level of Service segments and then calculates a weighted score based on length of the overlap for each LOS segment on the Sidewalk Gaps segment. A similar approach is applied to determine the Pavement Condition score where a 50’ buffer is used to select segments from the Pavement Conditions layer. The total score for this category is 100 with a total weighted value of 10 points.

Efficient and Reliable Mobility for People and Freight
The Efficient and Reliable Mobility for People and Freight category uses two criterion to calculate the composite score: Pedestrian/Bicycle Demand and Means of Transportation to work other than personal motor vehicle. The Pedestrian Demand criteria uses the DEMAND SCORE attribute in the Bike/Ped Demand 2015 data layer. As with other composite layers a 50’ buffer is applied to the Sidewalks Gaps layer to select Bike/Ped Demand 2015 segments and then calculates a weighted score based on segment lengths. The weighted score is then used to determine the overall score for the Pedestrian Demand criteria using the value breakdown shown in Table 8.

Table 8: Pedestrian Demand Criteria Values

<table>
<thead>
<tr>
<th>Pedestrian Demand Value</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=5</td>
<td>10</td>
</tr>
<tr>
<td>5-10</td>
<td>20</td>
</tr>
<tr>
<td>10-15</td>
<td>30</td>
</tr>
<tr>
<td>15-20</td>
<td>40</td>
</tr>
<tr>
<td>&gt;20</td>
<td>50</td>
</tr>
</tbody>
</table>
For the Means of Transportation to Work other than personal motor vehicle, the Transport to Work via Bike, Foot, and other methods is added up and divided by the total population found in the Census Block Data (ACS 2017) to determine the percentage of persons using non-personal automobile to get to work. The same 50’ buffer is applied to the Sidewalk Gaps layer to select Census Block Groups and then calculates a weighted score based on the percent of the Sidewalk Group Layer that is adjacent to the selected block groups. The overall score for this criteria is determined using the value breakdown shown in Table 9.

**Table 9: Means of Transportation to Work Criteria Values**

<table>
<thead>
<tr>
<th>Means of Transportation to Work other than personal motor vehicle Value</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5%</td>
<td>10</td>
</tr>
<tr>
<td>5-10%</td>
<td>20</td>
</tr>
<tr>
<td>10-15%</td>
<td>30</td>
</tr>
<tr>
<td>15-20%</td>
<td>40</td>
</tr>
<tr>
<td>&gt;20%</td>
<td>50</td>
</tr>
</tbody>
</table>

The two overall scores are then added together to get the composite score for this category. A 15% default weight is then applied to determine the overall value. The total score for this category is 100 with a total weighted value of 15 points.

**More Transportation Choices for People and Freight**

The More Transportation Choices category evaluates the proximity of the Sidewalk Gaps to other transportation modes and how the completion of the gap could benefit underserved population groups. Both the first and second criteria in this category assigns a value based on the distance the sidewalk gap (Full or Partial) is from another transportation mode: SunRail, Intercity Transit, Bus Stops, Trails, Bike Share stations, and Park & Ride Lots. The data layers used for these criteria are:

- **SunRail**: SunRail Phase 1, Phase 2 North, Phase 2 South, and Phase 3 Stations;
- **Intercity Transit**: Red Coach, MegaBus, La Cubana, Jet Set Line, All Tours, GMG Transport, HBCU Shuttle, Greyhound, The Florida Express Bus Stops;
- **Bus Stops**;
- **Trails**: FL Coast to Coast Trail, SUN Trail Network, Existing Recreational Trails, and FGTS Priority Trail Opportunities; and
- **Park & Ride**: Park-N-Ride Lots.

For each of these data layers, the closest feature to the Sidewalk Gap layer is used for the calculations. The point breakdown by distance is shown in Table 10.
Table 10: Distance to Other Transportation Criteria Values

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Value</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>SunRail and Intercity Transit</td>
<td>&lt;= ½ mile</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>&gt; ½ mile</td>
<td>0</td>
</tr>
<tr>
<td>Bus Stops, Trails, and Park &amp; Ride</td>
<td>&lt;= ¼ mile</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>&gt; ¼ mile</td>
<td>0</td>
</tr>
</tbody>
</table>

For the Underserved Population criteria in this category, the Composite Score Attribute from the Composite Underserved Population Concentration layer is used. To determine the average composite score, a 50’ buffer is applied to the Sidewalk Gaps layer to select Census Block Groups and then calculates a weighted score based on the percent of the Sidewalk Group Layer that is adjacent to the selected block groups. The overall score for this criteria is determined using the value breakdown shown in Table 11.

Table 11: Underserved Population Criteria Values

<table>
<thead>
<tr>
<th>Underserved Population Composite</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10</td>
</tr>
<tr>
<td>10-20</td>
<td>20</td>
</tr>
<tr>
<td>20-30</td>
<td>30</td>
</tr>
<tr>
<td>30-40</td>
<td>40</td>
</tr>
<tr>
<td>40-50</td>
<td>50</td>
</tr>
</tbody>
</table>

The three overall scores are then added together to get the composite score for this category. A 20% default weight is then applied to determine the overall value. The total score for this category is 100 with a total weighted value of 20 points.

Transportation Solutions supporting Florida’s Global Economic Competitiveness (Economic Competitiveness)

The Economic Competitiveness category assesses the sidewalk projects potential impacts to employment and population groups within the study area. This is accomplished by calculating the employment, hotel/motel, and population density in TAZs adjacent to the sidewalk gaps. The data layer used for this category and associated criteria is the Existing Year (Year 2015) Pop. + Emp. Density and uses the following attributes: POP. DENSITY 2015, EMP. DENSITY 2015, and HOTEL/MOTEL DENSITY 2015. In order to determine the value for each of the criteria, a category score is calculated by applying a 50’ buffer to the Sidewalk Gap layer to select TAZs that are adjacent and in close proximity to the gaps. A weighting formula is applied to each of attributes to determine the weighted score for that attribute. Table X provides the scoring breakdown for each of the attributes.
Table 12: Economic Competitiveness Criteria Values

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Value (persons per acre)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emp. Density 2015</td>
<td>&lt;=0.5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>0.5-1</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>1-3</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>3-5</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>&gt;5</td>
<td>30</td>
</tr>
<tr>
<td>Hotel/Motel Density 2015</td>
<td>&lt;=1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>&gt;1</td>
<td>40</td>
</tr>
<tr>
<td>Pop. Density</td>
<td>&lt;=0.5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>0.5-1</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>1-3</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>3-5</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>&gt;5</td>
<td>30</td>
</tr>
</tbody>
</table>

The three overall scores are then added together to get the composite score for this category. A 10% default weight is then applied to determine the overall value. The total score for this category is 100 with a total weighted value of 10 points.

Transportation Solutions supporting Quality Places to Live, Learn, Work, and Play (Quality Places)

The Quality Places category looks at the impact of the surrounding land uses on generating pedestrian demand. Proximity to schools, points of interests, the surrounding land uses, and whether or not the sidewalk gap is in/near an urban area are all used to generate the composite score for this category. The category’s breakdown of values and assigned scores is provided in Table 13.
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Value</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vicinity to Schools</td>
<td>&lt; ¼ mile</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>¼ - ½ mile</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>½ - ¾ mile</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>¾ - 1 mile</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>1 – 2 miles</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>&gt;2 miles</td>
<td>0</td>
</tr>
<tr>
<td>Vicinity to POI</td>
<td>&lt; ¼ mile</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>¼ - ½ mile</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>½ - ¾ mile</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>¾ - 1 mile</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>1 – 2 miles</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>&gt;2 miles</td>
<td>0</td>
</tr>
<tr>
<td>Land Uses</td>
<td>RH; RL; RM; RR; RVL; COM; OFF; INST; REC; MU</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>All others</td>
<td>0</td>
</tr>
<tr>
<td>Urban Areas</td>
<td>Within 1 mile of urban area</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>All others</td>
<td>0</td>
</tr>
</tbody>
</table>

The Vicinity to Schools and Vicinity to POI uses the Schools and Points of Interest map layers, respectively. The score for both of these criteria is calculated by using the distance from the Sidewalk Gap to the closest school and/or POI and using the corresponding score. For the Land Uses criteria, the score is based on if one or more of the desired land uses is along the Sidewalk Gap or not. The desired land uses are:

- RH – Residential High Density;
- RL – Residential Low Density;
- RM – Residential Medium Density;
- RR – Rural Residential;
- RVL – Residential Very Low Density;
- COM – Commercial;
- OFF – Office;
- INST – Institutional; and
- REC – Recreational.

It uses the General Future Land Use (2017) map layer where each of the listed residential categories are condensed into a single residential general future land use. The remaining listed categories have a corresponding value in the map layer. The Urban Area criteria uses the Urban Area map layer, found in the RCI layer group, to determine whether or not all or a portion of the Sidewalk Gap is found within one mile of a census designated urbanized area.
The four overall scores are then added together to get the composite score for this category. A 15% default weight is then applied to determine the overall value. The total score for this category is 100 with a total weighted value of 15 points.

Transportation Solutions enhancing Florida’s Environment and Conserve Energy (Environment & Conservation)
The last scoring category focuses whether the sidewalk gap could impact an environmental feature and if a project along the gap could help mitigate adverse traffic conditions. There are two criteria in this scoring criteria: Floodplains/Wetlands and Vehicle Level of Service. Table 14 provides the value and score for these criteria.

Table 14: Environment & Conservation Criteria Values

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Value</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floodplains/Wetlands</td>
<td>Inside</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Outside</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>50</td>
</tr>
</tbody>
</table>

The Environmental Group Layer is used to determine the score for the Floodplains/Wetlands criteria. If any portion of the Sidewalk Gap is identified as to being inside the boundaries of the floodplain or wetland, then the segment receives the value of ‘Inside’. The Vehicle Level of Service uses the Level of Service map layer found in the Base Data Group Layer. The LOS 2015 Attribute is used to make the determination. In the instance where a Sidewalk Gap layer contains more than one LOS value, the higher value is used for the calculation.

The two overall scores are then added together to get the composite score for this category. A 5% default weight is then applied to determine the overall value. The total score for this category is 100 with a total weighted value of 5 points.